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ABSTRACT

This research aimed at determining the feasibility of developing a technique for measuring career satisfaction of Navy enlisted personnel. Attitudinal data and personnel records were used to predict actual reenlistment behavior of a sample of 898 enlisted personnel composed primarily of those in the first term of enlistment. Attitudinal data were obtained from responses to earlier career counseling surveys administered to 4,455 enlisted personnel stationed in the San Diego, Norfolk, and Pearl Harbor areas. Personnel who reached the reenlistment decision time in their term of enlistment and for whom empirical evidence of decision was available constituted the analysis sample in this research. Using the concept of core values to provide a theoretical framework, hypotheses concerning self-worth and esteem, recognition, growth, expectancy, vital statistics, job, economics, family, training, recruiter/retention, career counseling, information, and treatment of others were generated and tested using actual reenlistment behavior as the criterion. Conclusions were drawn and recommendations made concerning retention and personnel satisfaction of Navy enlisted personnel. (Author/VG)

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TECHNICAL REPORT NO. 4

CAREER SATISFACTION AS A FACTOR INFLUENCING RETENTION

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20 ABSTRACT (Continue on reverse side if necessary and identify by block number)

This research was directed toward determining the feasibility of developing a technique for measuring career satisfaction of Navy enlisted personnel. Attitudinal data and personnel records were used to predict actual reenlistmen behavior of a sample of 898 enlisted personnel composed primarily of those in the first term of enlistment. Attitudinal data were obtained from

responses to earlier career counseling surveys administered to 4455 enlisted personnel stationed in the San Diego, Norfolk, and Pearl Harbor areas. Personnel who reached the reenlistment decision time in their term of enlistment and for whom empirical evidence of decision was available constituted the analysis sample in this research. Using the concept of core values to provide a theoretical framework, hypotheses concerning self-worth and esteem, recognition, growth, expectancy, vital statistics, job, economics, family, training, recruiter/retention, career counseling, information, and treatment of others were generated and tested using actual reenlistment behavior as the criterion. Two independent samples of first-term personnel were used for experimental test and validation of hypotheses. Those hypotheses confirmed at statistically significant levels were aggregated into logical categories and developed into a Career Satisfaction Inventory. Category subscores, total score, and a strength of feeling measure were obtained and compared for the two samples of first-term personnel. Results were cross-validated using a third independent sample of personnel in other terms of enlistment. Statistically significant differences between all means were obtained for the samples of first-term personnel. Job, Vital Statistics and Economics, Self-Worth/Esteem and Recognition, and Recruiter/Retention subscores, total score, and the strength of feeling measure yielded statistically significant differences between Stay and Leave group means for the cross validated sample. Results were discussed and a prototype quasi-economic model relating career satisfaction to the laws of supply and demand was presented. Conclusions were drawn and recommendations made concerning retention and personnel satisfaction of Navy enlisted personnel.

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SECTION 1 - INTRODUCTION

Career satisfaction is an important motivator of human behavior and a major factor influencing retention and satisfaction of Navy enlisted personnel. Although attitudes toward the value of work have tended to change over the last two decades, the importance of being gainfully employed has remained relatively constant. Reasons include the need to provide for the essentials of life--food, clothing and shelter--and the need to be engaged in meaningful activity such as work. Both of these needs are in large part met through satisfaction gained in pursuit of a career. When used in this sense, career implies a perspective greater than the 20 to 30 years of active duty typical in the Navy. Careers are influenced by factors other than job, including feelings of self-worth, family attitudes, and the environment in which work takes place. In short, a career is not just a job, it is a way of life.

Because career satisfaction motivates individuals, it has incentive value. Organizations, such as the Navy, have been accustomed to thinking of incentives in terms of monetary value--pay, fringe benefits, bonuses, and retirement. These incentives are considered to have monetary value because they can either be measured directly in dollars or be readily converted into dollars based on cost to the organization. Incentives with monetary value have been widely used as a manpower management tool. Amount and flow of personnel by type are controlled by varying the incentives offered for participation in organizations. If the organization has a ready source of manpower, such as was the case for military services in the draft environment, or if unlimited funds are available, little difficulty is encountered in heavily depending on use of incentives having monetary value. On the other hand, if participation is voluntary and funds are limited, use of incentives additional to those having monetary value probably is required to ensure an adequate supply of manpower. This is the situation the military services face today. Under these circumstances, obtaining greater understanding of the nature and incentive value of career satisfaction takes on added importance.

The positive influence that satisfaction has on retention, absenteeism, and turnover has been widely investigated. A number of satisfaction measurement techniques have been developed, particularly in the area of job satisfaction. However, few techniques have attempted to integrate measurement of job satisfaction with measurement of other career-related variables. This research has been directed toward that end. A technique for measuring career satisfaction of Navy enlisted personnel has been developed and its potential for use as a manpower management tool by the Navy has been examined.

This report reviews the research literature, discusses the conceptual framework used to develop the career satisfaction measurement technique, and describes methods and procedures used to develop specific measures of career satisfaction. Actual reenlistment behavior was used as the criterion in this research. Predictors were responses to earlier career counseling surveys and records contained in an automated Navy personnel file. Results are presented and discussed, and the feasibility of using the incentive value of career satisfaction to assist in management of Navy manpower is also explored.

SECTION 2 - BACKGROUND AND RELATED RESEARCH

Research related to the investigation of career satisfaction places emphasis on the world of work while giving due consideration to other aspects of life. A combined approach is important because work is an integral part of life which is influenced by the conditions under which it is performed. Work reinforces self-image and provides outlets for self-expression. Career satisfaction, which includes satisfaction with both work and life, depends on the extent to which adequate outlets are found for individual abilities, interests, personality traits, and values; and on becoming established in a type of work considered congenial and appropriate (Super, 1953).

Suitability of career choice in large part determines the goodness of fit between individual and career. In choosing a career, important decisions must be made regarding occupational area, educational preparation, and future employment opportunity. Young people are customarily faced with the need to make such decisions. However, those in the 35-to-45 age bracket are finding it necessary to make similar decisions with increasing frequency. For example, the need to change occupation or job, or to retire prematurely is "likely to hit one person in five every year as jobs become obsolete at a faster and faster rate." (Haldane, 1974, p. 2).

Technological advances make some careers obsolete. Changes in health condition can affect ability to continue a given career. Economic downturns cause some jobs to be lost, and mergers and reorganizations often results in the abolishment of certain positions. In addition, dissatisfaction with present position is a major motivator of job change (Taylor, 1975). Planned job change can be unsettling, but the need to make an unplanned change in mid-career frequently causes serious personal turbulence. Kay (1974) has called such turbulence the "career destination crisis." This type of crisis tends to have a lasting and negative influence on personal confidence and future career satisfaction

unless constructive assistance and counseling is obtained by individuals experiencing such a crisis.

Career guidance programs have been "predicated upon the premise that job satisfaction is a prerequisite to self-fulfillment and happiness" (Pietrofesa & Splete, 1975). When the number of occupations was small and much hard work was necessary for survival, the importance of choosing a satisfying career was overshadowed by the need to work in order to survive. Because work was so essential to life, many social and moral imperatives, such as the Protestant work ethic (Weber, 1930), were built around the social institution of work. Economic affluence (Galbraith, 1958) has decreased the survival value of work and urbanization and technological change have caused the number of potential careers to increase. As a result, attitudes towards the value of work have changed (Bowers, 1975) and career choice has become more difficult. Although effective career counseling can assist in alleviating the latter difficulty, changing attitudes toward the value of work must be dealt with organizationally as well as individually.

Inflation, increased wages, demands for a shorter work week, and capital-intensive production methods have caused greater emphasis to be placed on work efficiency and effectivity. This, coupled with rising threats to job security caused by the economic downturn and changing attitudes toward the value of work, has caused career satisfaction to decline and job stress to increase to the point that the quality of work life has become a serious concern (Walton, 1975). "It is possible that the pressure for competitive efficiency may be supplemented by recognition of the value of work as a source of human satisfaction" (Isaacson, 1971, p. 5). The need to find ways to cope with these changes has led to widespread interest in research on motivation, job satisfaction and turnover. Each of these areas will be discussed in the following paragraphs.

2.1 MOTIVATION

Motivation is the driving force that causes careers to be built and work to be done. A number of different theories of motivation have been formulated. For example, Maslow (1943, 1954) postulated that an ascending hierarchy of human needs serves as the motivator of the individual. Physiological needs are at the lowest level, followed by the needs of safety, love and affection, esteem and self-actualization. An individual's main motivators stem from the lowest needs level that remains unsatisfied. Thus, as civilization advances and affluence increases, the motivational strength of physiological and safety needs has tended to decline.

A somewhat similar but more specialized theory of motivation has been developed by Herzberg and his associates (1959, 1966). They developed a two-factor theory in which the work itself, responsibility, and advancement function as motivators, and working conditions, salary, interpersonal relations, and security function as dissatisfiers Herzberg calls "hygiene conditions." Motivators tend to produce positive job attitudes. In contrast, lack of sufficient "hygiene conditions" tends to produce poor job attitudes, and their satisfaction can only bring about a neutral condition.

Vroom (1964) has developed an expectancy theory of motivation conceptually related to the earlier work of Lewin (1947). Vroom's theory makes use of two prediction models. The first deals with valences of outcomes and the second with force toward behavior. In his review of Vroom's theory, Mitchell (1974) reports findings that tend to indicate more support for the valence model than for the force model.

An expectancy approach was used by Glickman, Goodstadt, Korman, and Romanczuk (1973) in constructing a longitudinal model of Navy career motivation. This model, a cognitive map of career motivation, was used by these investigators to identify types of Navy interventions that might be expected to increase retention. Key points for administration of interventions were also determined

on the basis of this model. Interventions identified include improved career counseling following enlistment, providing enlisted personnel with more assistance in making occupational choices and decisions, increasing career flexibility by increasing opportunity for lateral transfer or cross-training, and developing techniques to overcome perceived inequities in incentive pay (Goodstadt, Korman, Romanczuk, Frey, & Glickman, 1974). A general finding of this research was that when it comes to incentives, more is not better either in civilian life or in the fleet.

A theory of motivation based on core values has been developed for use in research on Navy career counseling (Holoter, Stehle, Conner, & Grace, 1974). Core values function as motivators that cut across the hierarchy of needs and carry a valence unique and internal to the individual. Core values also function to filter perceptions, affect the cognitive processes, and moderate behavioral expression. By making use of the first two of these functions, core values can be measured by determining how an individual perceives and judges various aspects of life. More specifically, this theory postulates that:

a. Each individual has a unique set of core values.

b. Perception, cognition, and behavior are influenced by the functioning of core values.

c. Experience may cause core values to change, that is, to be reinforced, diminished, or deleted.

d. Core value change can be positive (healthy) or negative (pathological).

e. Individuals and organizations coexist in a state of dynamic equilibrium within a social envelope.

f. Negative core value change within the social envelope is dysfunctional because it tends to decrease either individual health or organizational well-being, or both.

g. If core values held by the individual are inconsistent with organizational requirements, individual satisfaction tends to decrease.

h. Individuals having core values inconsistent with organizational requirements tend to withdraw from such organizations.

Following this line of reasoning, reenlistment behavior can be modeled using core values as the building blocks. Model blocks can be typed on the basis of locus of function within the social envelope. Blocks that function internal to the individual are called Issues of Personhood. Blocks that function external to the individual are called Ambient Influences. Both types of blocks impact on career satisfaction.

In summary, four theories of motivation have been discussed. Major conceptualizations utilized in these theories include a human needs hierarchy, motivator and "hygiene condition" factors, expectancy, and core values. The last conceptualization has been developed into an empirically testable approach applicable to the study of Navy reenlistment behavior.

2.2 JOB SATISFACTION

Job satisfaction is a construct that reflects workers' attitudes toward tasks they perform, roles they play in the work setting, and other conditions of employment. This construct provides a useful frame of reference for identifying issues associated with the measurement of satisfaction (Locke, 1969). Research on job satisfaction has proliferated, and "...estimates suggest that more than 3,000 articles investigating job satisfaction have been published since the appearance of Roethlesberger and Dickson's (1939) Hawthorne studies" (Imparato, 1972). More recently, Shonyo (1975) has published a report that facilitates access to the job satisfaction research literature by identifying over 300 Government-sponsored reports in this area.

A number of instruments designed to measure job satisfaction have been developed. Examples include the Porter Need Satisfaction Questionnaire (PNSQ) (Porter, 1961; Porter & Lawler, 1968), the Job Descriptive Index (JDI)

constructed during the Cornell studies on job satisfaction (Smith, Kendall & Hulin, 1969), and the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967).

The PNSQ is designed to measure satisfaction over five need areas--security, social, esteem, autonomy, and self-actualization--mainly derived from Maslow (1954). Respondents rate "rewards actually received" or "perceived equitable level of rewards" using a 7-point scale. Satisfaction is computed as the discrepancy between rewards received and rewards expected.

The JDI measures attitudes towards work in five satisfaction areas: the work itself, pay, opportunities for promotion, supervision, and co-workers. These scales were developed on the basis of a number of factor analyses of the possible dimensions of job satisfaction. Job descriptors in these areas are rated on a 3-point scale, Yes, ?, or No.

The MSQ measures satisfaction with 20 facets of the job environment: ability utilization, achievement, activity, advancement, authority, company policies and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security, social service, social status, supervision-human relations, supervision-technical, variety, and working conditions. Each facet is measured by summing 5-point scale ratings for five items.

These three job satisfaction instruments appear to be measuring somewhat different dimensions. For example, in comparing PNSQ and JDI measures, Imparato (1972) found them to be moderately correlated ($r = .69$). The difference in scoring techniques used may account for the failure to obtain a higher correlation between these two instruments. Gillet and Schwab (1975) compared convergent and discriminant validities of the JDI and MSQ. The four satisfaction scales common to these instruments--pay ($r = .56$), promotion ($r = .57$), supervision ($r = .70$), and co-workers ($r = .49$)--show moderately high validities. However, a substantial amount of variance remained unaccounted for in this

study. For example, about 50 percent of the variance was common to the two supervision measures and about 25 percent was common to the two co-workers measures. Thus, if measures for another construct were to be related to job satisfaction measured using the JDI scale, results would not necessarily be replicated if the MSQ were used.

Other techniques have also been applied to the measurment of job satisfaction. For example, Kunin (1955) developed a graphic self-rating technique, the General Motors Faces Scale, that has been used to measure job satisfaction. This scale consists of eleven male faces with expressions ranging from a broad smile to a deep scowl. Dunham and Herman (1965) developed a version of this scale using female faces. Results showed that both male and female versions may be used interchangeably to measure job satisfaction of either male or female employees.

Work environment factors have been found to influence job satisfaction. One such factor is organizational climate (James & Jones, 1974; Hulin, 1969; Friedlander & Margulies, 1969; and Taguiri & Litwin, 1968). Favorable climate is characterized by perceived effort on the part of management to get organizations moving, good social relationships, and lack of managerial hindrance or busywork. Favorable climate tends to be associated with greater job satisfaction. Other organizational factors, such as size and flatness or tallness, have also been found to be related to job satisfaction. Individuals in small working groups tend to be more satisfied than those in large working groups. Total size of organizations also influences preferences for tall or flat organizational structures. In organizations employing fewer than 5,000 individuals, satisfaction was found to be greater in flat companies; in organizations employing over 5,000 employees, satisfaction was greater in tall companies (Porter & Lawler, 1965).

Dissatisfied workers often have unrealistic expectations or may aspire to occupational levels far beyond their actual abilities. More satisfied workers

tend to be less skeptical and more out-going (Bass, 1956). Job characteristics, work quality and job-related interests tend to influence job satisfaction, and the "match" between worker interests and job characteristics was also found to be a good predictor of satisfaction (Calitz, Hilaael, McCormick, & Peters, 1974).

Occupational group has been found to be a determiner of satisfaction with various facets of the job. In a cross-national study Kraut and Ronen (1975) related job facets to overall satisfaction, intent to stay, work tension, and performance rating for groups of salesmen and repairmen. They found overall satisfaction to be best predicted by challenge, earnings, advancement and manager. For both salesmen and repairmen, challenge and manager were also important predictors of intent to stay. For salesmen, advancement was a good predictor; for repairmen, earnings and skills were good predictors.

Occupational choice and occupational satisfaction have been found to be influenced by self-esteem (Greenhaus, 1971). The relationship between self-esteem, performance, and satisfaction was further investigated by Greenhaus and Badin (1974). They found that task-specific self-esteem (Korman, 1970) was significantly related ($p < .01$) to task performance and that socially influenced self-esteem was significantly related ($p < .02$) to performance for high authoritarian individuals. When individuals were grouped according to levels of self-esteem and task satisfaction, the group having high task-specific self-esteem and high satisfaction performed best ($Mn = 4.45$) and the group having similarly high self-esteem but low satisfaction performed least well ($Mn = 2.47$). The performance-satisfaction correlation for the high self-esteem group was .50 ($p < .01$); for the low group .17. Self-esteem was found not only to influence performance positively, but also to moderate the influence that performance had on satisfaction. Other findings concerning the relationship between job satisfaction and performance tend to be mixed. However, these findings indicate that positive feelings of self-esteem might increase the likelihood of reenlistment of quality personnel in the Navy.

The relationship between job satisfaction and job performance has also been investigated in a Navy setting. In a comparison of Navy enlisted men and civilian scientists in Antarctica, Doll and Gunderson (1969) found significant positive correlations between satisfaction and performance for the scientists but not for the enlisted men. Brayfield and Crockett (1955) suggested that there was little reason to suppose that satisfied employees are more productive. However, later evidence tends somewhat to contradict this statement, and Bass and Barrett (1972) conclude that there may be a tenuous positive relationship between performance on the job and attitude.

Factors independent of work environment can influence job satisfaction. For example, Katzel, Barrett, and Parker (1961) found that employee attitudes were influenced by situational characteristics and that small-town cultural patterns had a positive influence on attitudes. Environmental frame of reference can also influence satisfaction with pay. Equally paid workers in communities where the cost of living was high were not as satisfied with their pay as those in communities where the cost of living was lower (Hulin, 1966; Smith, Kendall & Hulin, 1969).

Overall satisfaction with life tends also to be related to job satisfaction. The individual satisfied with life in general tends to be satisfied with job. This is particularly true for men (Brayfield, Wells & Strate, 1957). In a study of over 400 workers, both blue and white collar employees, Kornhauser (1965) found that the higher their occupational level, the better adjusted workers were to life in general. If life conditions were favorable, workers seemed to want to progress and believe in positive aspects of the job. If life conditions were unfavorable, workers seemed to downgrade the job situation. This finding tends to refute the theory that people unhappy with life tend to compensate for their unhappiness by finding greater satisfaction in their jobs. There seems to be a "spillover" of satisfaction between job and life. Worker perceptions that abilities were being well used were strongly related to overall life satisfaction at all occupational levels. Lack of opportunity to be

self-actualizing (Maslow, 1943, 1954) in work may have been a partial cause of dissatifaction among those who felt their abilities were not being well utilized. The importance of promotions, co-workers, supervision, pay, and work has also been found to be related to life satisfaction (Iris & Barrett, 1972). The direction and degree of relationship depends on the favorability of the situation.

Individual factors, such as health, also can influence job satisfaction. In a study of 5,851 Navy enlisted men in operational settings, McDonald and Gunderson (1974) found health to be related to measures of job satisfaction. Personnel studied were aboard six ships deployed for durations of six to eight months. Ratings of satisfaction with present job, degree to which present duties employed abilities well, and boredom were summed to form one measure of job satisfaction. This measure correlated moderately well ($r = .61$) with JDI measures obtained for a sample of the personnel studied ($N = 1,021$). The single variable that correlated most highly with job satisfaction was the Health Opinion Scale, a brief symptom index which has been shown to discriminate psychiatric patients from healthy controls in the Naval service (Gunderson, Arthur & Wilkins, 1968). This strongly suggests that good health is related to satisfaction on the job. Other findings from this study indicate that Naval experience (age and length of service), level of responsibility (pay grade), working closely with others, and occupational specialty contribute to level of satisfaction. Jobs generally considered to be the most routine, arduous, dirty, or hazardous were least satisfying.

2.3 RETENTION AND TURNOVER

Satisfaction has long been thought to influence retention and turnover in organizations. Porter and Steers (1973), who reviewed a large number of empirical studies of the relationship between job attitudes and absenteeism and turnover, concluded that there was an inverse relationship between job attitudes and withdrawal from organizations. Ross and Zander (1957) found that the degree to which needs are perceived to be fulfilled influences

turnover. In this study, a group of workers who had resigned was matched with a group who remained with the company. These investigators found no reported differences in strength of needs between groups, but significant differences were obtained in extent to which needs were perceived to have been met. Also, measures of recognition and autonomy were lower for the group that had resigned.

Fishbein (1967) has developed a model for predicting overt behavior on the basis of (1) attitude toward the behavior in a given situation, (2) perceived expectations of others--social normative beliefs, and (3) motivation to comply with normative beliefs. Newman (1974) used the Fishbein model to predict absenteeism and turnover of employees in a health care setting. Attitude was measured using foolish-wise, good-bad, harmful-beneficial, and rewarding-punishing semantic differential scales. To measure perceived expectations, opinions of other respected people were judged on a 7-point scale. The Faces Scale (Kunin, 1955) was used to measure overall attitude toward the job and the JDI to measure attitudes toward specific job aspects. In this work setting, intent correlated .10 with absenteeism and .39 ($p < .01$) with voluntary resignation. The Fishbein model variables had a multiple correlation of .12 with absenteeism and .36 ($p < .01$) with resignation. The multiple correlation of the five JDI scales with absenteeism was .27 and with resignation, .21. Adding the Faces Scale to the JDI scales, the multiple correlation with absenteeism increased to .36 ($p < .05$); with resignation, to .26. Traditional measures of job satisfaction predicted absenteeism better than the Fishbein model variables, while the reverse was true for resignation. However, none of these predictors separately or in combination accounted for more than 23 percent of the criterion variance. Correlations obtained in this work setting were substantially lower than those obtained under controlled laboratory conditions. Work settings are complex situations with many uncontrollable and unaccounted for sources of criterion variance. In order to overcome these problems, research "should incorporate more facets of personal and situational information in a comprehensive, but integrated, prediction system" (Newman, 1974, p. 615).

Organizational commitment and job satisfaction as predictors of turnover were studied by Porter, Steers, Mowday, and Boulian (1974). Organizational commitment was measured using a 15-item questionnaire designed to determine each individual's identification with and involvement in a specific health care organization. The JDI was used to measure job satisfaction. Attitudes for stayers and leavers were compared across four time periods--twice while workers were in training status and twice when full-time on the job. Stayers tended to be older (Mn = 31.9 years) as compared with leavers (Mn = 23.9). Results of a discriminant analysis which controlled for age showed no significant discrimination between stayers and leavers while in training status. However, significant relationships ($p < .05$) between turnover and attitude measures were obtained when stayers and leavers were engaged in full-time work. Commitment to the organization was the most important variable in differentiating between groups. Stayers expressed higher levels of job satisfaction and commitment than did leavers, except for satisfaction with pay. Stayers and leavers were comparatively well satisfied with their pay. JDI subscales and commitment shared less than 35 percent of the common variance on the average across four time periods (average r's = .50, .42, .40, and .55). Findings were explained in terms of the extent to which expectations had been met on the job. Another explanation, the degree to which worker's core values were congruent with organizational requirements, was not explored in this investigation.

In another study examining antecedents and outcomes of organizational commitment Steers (1976) found that commitment correlated significantly with certain outcomes. For R&D scientists, it correlated with three outcomes--desire to remain ($r = .36$, $p < .001$), intent to remain ($r = .38$, $p < .001$) and attendance ($r = .28$, $p < .01$). For hospital employees, it correlated with four outcomes--desire to remain ($r = .44$, $p < .001$), intent to remain ($r = .31$, $p < .001$), quantity of work ($r = .11$, $p < .05$), and promotion readiness ($r = .10$, $p < .05$). These results tend to support earlier findings of this investigator that organizational commitment was a relatively good predictor of turnover. Person, job

and organizational characteristics were all antecedents found to be significantly related to organizational commitment. This finding emphasizes the need to take factors additional to job satisfaction into consideration in order to improve the prediction of turnover.

The relationship between job dissatisfaction and turnover has been studied by a number of investigators. Using matched groups of terminators and non-terminators, Hulin (1966) found that where dissatisfaction was strongest, turnover was greatest. Dissatisfaction as a predictor of turnover was investigated by Taylor and Weiss (1969). They found that in a sample of over 460 employees in a discount store chain, 64 percent classified as "leavers" actually left as compared with less than 20 percent of "non-leavers." If factors that functioned as dissatisfiers, such as promotion and pay policy were changed, job satisfaction increased and turnover decreased by 18 percent (Hulin, 1968).

The availability of other comparable jobs tends to moderate the correlation found between job attitudes and terminations (Dansereau, Cashman & Graen, 1974). The extent to which employees leave a given organization can be predicted on the basis of utility. Likelihood of staying is directly related to the scarcity of other alternative jobs. In this study, subjective probability of attaining a comparable job elsewhere was used as the measure. Results indicated that people tend <u>not</u> to leave their present jobs if they doubt the attainability of finding a comparable job elsewhere. Similar findings were obtained by Hulin (1966) and Waters and Roach (1971).

A number of retention studies have been conducted in the Navy setting. For example, Bowers (1973) used multiple regression analysis to determine the degree to which intent to reenlist could be predicted on the basis of organizational practice and preference measures. Stoloff, Lockman, Allbritton, and McKinley (1972) investigated the influence of job satisfaction on first-term reenlistment behavior using intent to reenlist as a criterion. Factors found to be negatively related included not liking the work itself and experiencing

a supervisory style described as showing low consideration and having high structure or a production-orientation. Research relating job satisfaction with reenlistment intentions in the Air Force confirmed this latter finding (Cantrell, Hartman & Sims, 1967).

Reenlistment intent has generally been found to be the best predictor of actual reenlistment. Both have been used as criteria in research on Navy retention. Two methods for measuring actual reenlistment have been used in Navy research. The first is reenlistment rate, which is calculated cross-sectionally for selected groupings of Naval personnel. The second is individual reenlistment decision, which requires that personnel be individually tracked and that research design be longitudinal. Aside from experimental control considerations, the first method has the serious disadvantage that there are at least three officially recognized formulae for calculating reenlistment rate (Grace, 1976). If reenlistment rates are used as the research criterion, practical considerations make it extremely difficult to determine exactly how the rate being used was calculated. Results obtained from studies using different rates cannot be adequately compared. If for no reason other than this, measuring actual reenlistment on the basis of individual reenlistment decision appears to be the sounder of the two methods.

Several Navy retention studies have used both stated intent to reenlist and actual reenlistment behavior as criteria. For example, Bruni, Jones and James (1975) in their study of correlates of first-term reenlistment behavior aboard ships found that personnel who reenlisted had higher general satisfaction and perceived their jobs to be more challenging and characterized by higher esprit than those who left the Navy. LaRocco, Gunderson, and Pugh (1975) found personal characteristics, such as marital status and age, work-related variables such as months at sea, and disciplinary record to be good predictors of reenlistment. Singer and Morton (1961) used records contained in the Bureau of Naval Personnel Enlisted Master Tape (EMT) to study retention of enlisted Navy personnel in selected critical specialities. Length of duty at sea was found to be inversely related and pay grade directly related to reenlistment.

In a study of four Navy occupational groups (ELEX, MECH, COMM, SN/FN), Lockman, Stoloff and Allbritton (1972) found correlations varying from .36 to .46 between reenlistment intent and actual decision to reenlist. They also found that reenlistment decision of those who intend to reenlist could be better predicted (R = .51) by adding economic, psychological, and personal characteristic variables to the equation. Length of first-term enlistment, coming from a broken home, and liking duty station were major predictor variables. Because data for this study were obtained in 1964 when the draft was in force, shorter enlistments were commonplace. In the all-volunteer environment, enlistments have been lengthened, with four years a standard, so the first major predictor no longer applies. For those who did not intend to reenlist, the similarly computed multiple correlation was negligible (R = .18). Using attitudinal variables as predictors, Holoter, Stehle, Conner, and Grace (1974) were able to differentiate between first-term personnel who reenlisted and those who left the Navy. By combining 10 variables, 91 percent correct association with stay behavior (Phi = .24, $\underline{P} < .001$) was obtained for the 43 stayers from the group who did not intend to reenlist (N = 452). For 41 who were undecided about reenlisting, another set of 10 variables were combined to yield 96 percent correct association with stay behavior and 70 percent correct association with leave behavior (Phi = .78, $p < .001$). Further research using this approach is described in following sections of this report.

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SECTION 3 - RESEARCH OBJECTIVES, METHODS, AND PROCEDURES

The research objectives, methods, and procedures discussed in this section reflect the approach utilized in this research. This approach combined survey research methodology with experimental data treatment techniques. Attitudes and opinions reflected in survey responses and data obtained from Navy personnel records were the raw data from which variables hypothesized to be predictive of reenlistment were developed. Predictions were tested across independent samples of survey respondents using the actual reenlistment behavior of individuals as the criterion.

3.1 RESEARCH OBJECTIVES

A major objective of this research was to determine the feasibility of developing a technique for measuring career satisfaction of Navy enlisted personnel. Other objectives included (1) determining the extent to which attitudinal data and personnel records could be used to predict actual reenlistment behavior, (2) testing the feasibility of identifying target populations differentially receptive to reenlistment, and (3) developing a technique for contacting and positively influencing enlisted personnel concerning their reenlistment decisions.

In order to accomplish these objectives, reenlistment intent was compared against actual reenlistment behavior to determine the degree to which intent predicted and/or moderated reenlistment behavior. Approximately one year elapsed between the times these two measures were obtained. Attitudinal data and Navy personnel records were screened for suitability as research variables. Those judged to be suitable within the core values theoretical framework were selected for further investigation. Individual variables found to be significant predictors were combined into categories on the basis of actionability. Criteria used for categorization included:

a. Action outcomes would be likely to (1) increase retention of quality enlisted personnel and (2) improve organizational effectiveness at the unit level.

b. Actions could be accomplished through regular Navy channels.

c. Existing Navy agencies, programs, and/or personnel had been assigned responsibility for taking such actions.

Category scores were developed and tested to determine the extent to which each combination of variables predicted stay and leave behavior of independent samples of Navy enlisted personnel.

3.2 METHOD

A quasi-experimental method was used in this research. Data bases containing attitudinal and Navy personnel records data were constructed to serve as independent groups on which experimental tests, validations, and cross-validations would be performed. Attitudinal data were obtained from surveys conducted in earlier phases of this research. In Phase 1, a sample of 1,711 enlisted first-term and second-term personnel were surveyed in the fall of 1972 using a 253-item questionnaire specially designed for this purpose. This sample included 627 first-term personnel within six months of reenlistment decision. In Phase 2, the research was expanded to include all terms of enlistment and a total of 2,744 personnel were surveyed in the fall of 1973. Of these, 1,760 had served in the Navy less than four years. Navy personnel records were obtained from Enlisted Master Tapes (EMTs) compiled in June of the years preceding and following each of the surveys. Records on these tapes were used to determine actual reenlistment behavior and obtain other information determined to be suitable for hypothesis generation.

Three samples were drawn from the personnel surveyed in Phase 1 and Phase 2. Separate data bases were built for each of these samples. The first two samples were comprised of Phase 1 and Phase 2 first-term personnel who had the opportunity to make a reenlistment decision and for whom evidence of decision was available. The third was comprised of Phase 2 personnel in other terms of enlistment for whom the same evidence was available. The longitudinal nature

of this study required tracking of individuals whose reenlistment decisions could distribute over a time span of about 6 years. Some of the respondents failed to provide information required to permit tracking, and others provided information inadequte to permit a match with Navy personnel records. For these reasons, the number eligible for inclusion in these three data bases shrank to a total of 898.

The decision logic used to establish actual reenlistment behavior required that the date entered as Expiration of Active Obligated Service (EAOS) item on the first EMT for a given individual must have been increased by at least two years on the second EMT. According to established Navy procedure, individuals for whom EMT data were not available on a post-survey tape had left the service. Thus it was possible to identify Stay (N = 142) and Leave (N = 756) groups which together comprised the set of individuals used in this research. Personnel who had a change in EAOS date of less than two years were excluded since it is a regular Navy practice to consider such changes to be extensions rather than reenlistments.

3.3 PROCEDURE

The procedure used to investigate career satisfaction as a factor influencing retention is summarized in Figure 3-1. Survey questionnaires and Navy personnel records were examined and thirteen categories of hypotheses developed. Four categories reflected core values typed as Issues of Personhood. These were Self-Worth and Esteem, Recognition, Growth, and Expectancy. A fifth category, Vital Statistics, took into account the fact that demographic background tends to shape core values and thus serves as a lifelong influencer of motivation and satisfaction. The eight remaining categories reflected core values typed as Ambient Influences. These were Family, Job, Economics, Training, Information, Career Counseling, Recruiter/Retention, and Treatment of Others.

For each of the thirteen categories, hypotheses predictive of conditions under which individuals would be more or less likely to reenlist were generated.

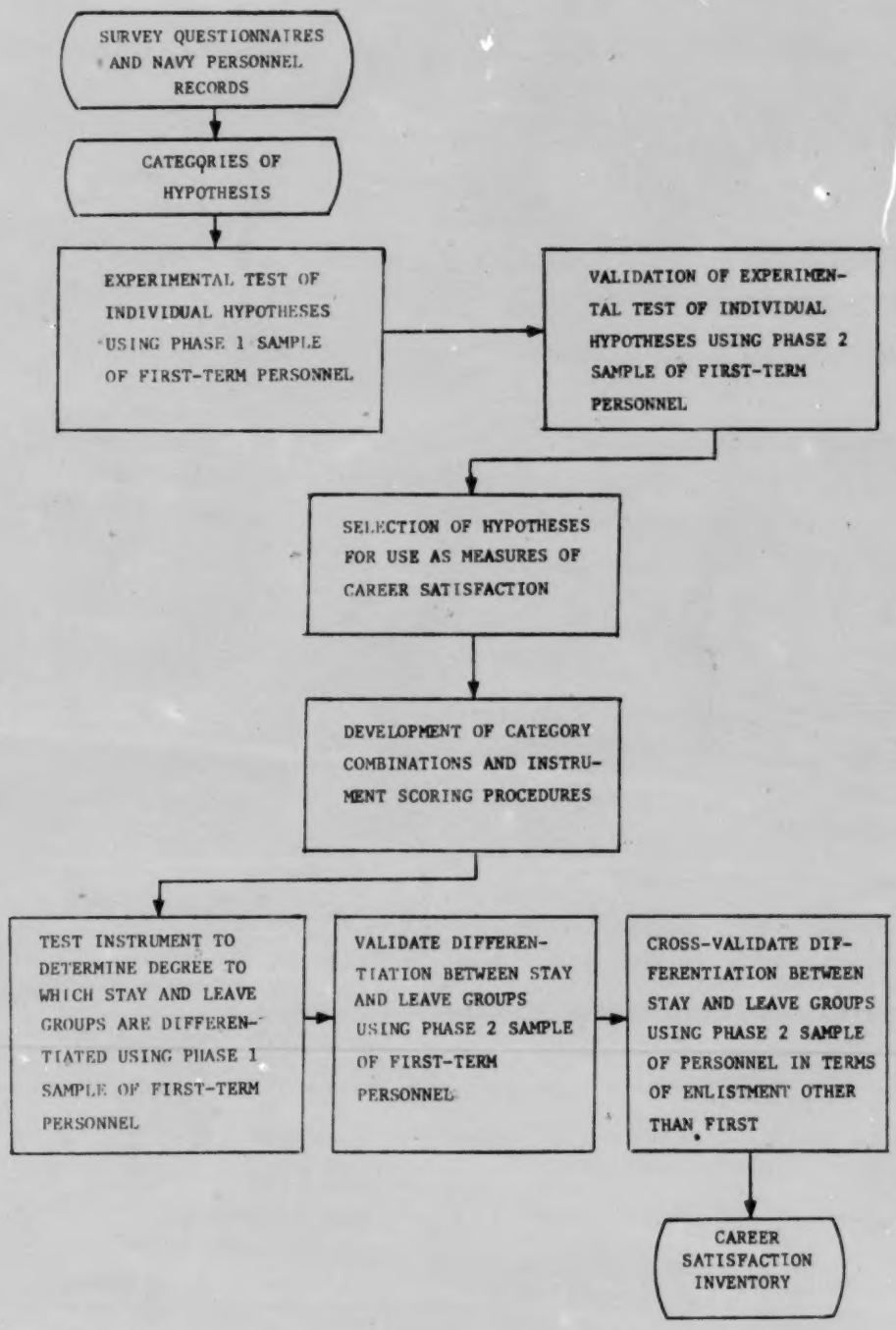

SURVEY QUESTIONNAIRES AND NAVY PERSONNEL RECORDS
CATEGORIES OF HYPOTHESIS
EXPERIMENTAL TEST OF INDIVIDUAL HYPOTHESES USING PHASE 1 SAMPLE OF FIRST-TERM PERSONNEL
VALIDATION OF EXPERIMENTAL TEST OF INDIVIDUAL HYPOTHESES USING PHASE 2 SAMPLE OF FIRST-TERM PERSONNEL
SELECTION OF HYPOTHESES FOR USE AS MEASURES OF CAREER SATISFACTION
DEVELOPMENT OF CATEGORY COMBINATIONS AND INSTRUMENT SCORING PROCEDURES
TEST INSTRUMENT TO DETERMINE DEGREE TO WHICH STAY AND LEAVE GROUPS ARE DIFFERENTIATED USING PHASE 1 SAMPLE OF FIRST-TERM PERSONNEL
VALIDATE DIFFERENTIATION BETWEEN STAY AND LEAVE GROUPS USING PHASE 2 SAMPLE OF FIRST-TERM PERSONNEL
CROSS-VALIDATE DIFFERENTIATION BETWEEN STAY AND LEAVE GROUPS USING PHASE 2 SAMPLE OF PERSONNEL IN TERMS OF ENLISTMENT OTHER THAN FIRST
CAREER SATISFACTION INVENTORY

Figure 3-1. Procedure Used to Investigate Career Satisfaction as a Factor Influencing Retention

Research findings and experience with the Navy were used as the basis for generating these hypotheses. This approach permitted test of research-obtained relationships and of "folklore" about why personnel reenlist in the Navy. Because variable development sources were limited to survey responses and EMT records, hypotheses were limited by data availability.

Five-point survey scales were dichotomized using the two extreme ratings (4 and 5, or 1 and 2) either in a favorable or an unfavorable direction as the cutting point. Categorical responses were also dichotomized, as appropriate. Total Score was obtained by summing scores for each individual across sets of hypotheses. In both phases, there was a set of questions requesting two responses--level of importance and level of satisfaction. Each of these was combined into a single variable reflecting either importance and satisfaction (I/S) or importance and dissatisfaction (I/D). Tests used "important and satisfied" or "important and dissatisfied" versus all other response combinations. A Strength of Feeling measure was obtained by summing the number of these extremes for each individual.

Predicted reenlistment behavior was compared against actual reenlistment behavior for each of the hypotheses generated. Four-fold tables were constructed and Phi-coefficients computed to determine degree, direction, and significance of relationship. The Phase 1 sample of first-term personnel was used for experimental test of hypotheses. Findings were validated using the Phase 2 sample of first-term personnel. Because directionality was stated in each hypotheses, confirmation at least at the level of $p < .10$ for one of these samples and at least at the level of $p < .05$ for the other sample was deemed adequate for a hypothesis to be selected as a measure of career satisfaction.

Distributions of measures across categories were examined and like categories combined to increase category size and reduce scoring complexity. Simplification was necessary because procedures used to develop the instrument were also to be designed for easy transfer and use at the unit command level.

In order to determine the ability of combined category scores to differentiate between Stay and Leave groups, the significances of differences between means for the Phase 1 and Phase 2 samples of first-term personnel were computed and tested for statistical significance. Findings were cross-validated using the sample of Phase 2 personnel in terms of enlistment other than the first. The outcome of this procedure was the Career Satisfaction Inventory, which is an instrument designed to measure likelihood of reenlistment in the Navy.

SECTION 4 - RESULTS

Research results obtained in determining the feasibility of developing a career satisfaction measurement technique are presented in this section. First, actual reenlistment behavior findings are described. Second, results of the experimental test and validation of hypotheses are detailed. And third, scoring procedures and findings relative to the differentiation between Stay and Leave groups are discussed.

4.1 ACTUAL REENLISTMENT BEHAVIOR

Actual reenlistment behavior of the three research samples independent of intent to reenlist is shown in Table 4-1. Because of the time and manner in which the Phase 1 sample was drawn, the size of this sample (N = 627) was the largest of the three samples. Rates for first-term personnel (10.5% and 17.9%) were less than one-fourth the rate for personnel in other terms of enlistment (69.8%).

Table 4-1. Reenlistment Rates of the Three Career Satisfaction Study Samples Based on Evidence of Actual Reenlistment Decision of Individuals.

Term of Enlistment	Study Sample	Percent	
		Stay	Leave
First Term	Phase 1 (N = 627)	10.5%	89.5%
	Phase 2 (N = 218)	17.9%	82.1
Other Terms	Phase 2 (N = 53)	69.8	30.2

Navywide reenlistment rates obtained for a comparable time frame are shown in Table 4-2. The three computational formulae take extensions and eligibility for reenlistment variously into consideration, which accounts for the differing rates shown for a given time period. Comparison of rates shown in Tables 4-1 and 4-2 indicate that study sample rates more closely approximate the Navy computational formulae than the Department of Defense formula. Sample divergencies from Navywide rates can be attributed both to the nature of the samples drawn and to problems inherent in official computations of reenlistment rate (Grace, 1976). Both sample and Navywide data clearly show that those who have reenlisted in the Navy once are more likely to reenlist than those who are making a reenlistment decision for the first time.

Table 4-2. Navywide Reenlistment Rates for Career Satisfaction Study Time Frame

Term of Enlistment	Computational Formula[1]	Time Period		
		FY72	FY73	FY74
First Term	Department of Defense	23.0%	23.0%	32.9%
	Navy 4YO + 6YO	13.0	14.0	19.0
	Navy 4YO Only	10.0	11.0	14.5
Other Terms (Career)	Department of Defense	91.0	92.0	80.3
	Navy 4YO + 6YO	61.0	69.0	61.4
	Navy 4YO Only	60.0	69.0	59.9

[1]YO stands for Years Obligated

Intent to reenlist has been found to be a good indicator of reenlistment decision. the relationship between reenlistment action and intent to reenlist for the three study samples is shown in Table 4-3. For first-term personnel who intended to reenlist, the Yes group, 85.3 percent of the Phase 1 sample and 92.9 percent of the Phase 2 sample actually stayed in the Navy. For personnel in terms of enlistment other than the first, all of those in the Yes and Undecided groups actually stayed in the Navy. For first-term personnel in the Undecided group, the likelihood of staying in the Navy varied from 35.4 percent for the Phase 1 sample to 57.6 percent for the Phase 2 sample. For first-term personnel in the No group, 96.3 percent of Phase 1 sample and 95.9 percent of the Phase 2 sample actually left the Navy. For personnel in

Table 4-3. Reenlistment Actions of Career Satisfaction Study Samples by Intent to Reenlist.

Term of Reenlistment	Study Sample	Reenlistment Intent	Percent	
			Stay	Leave
First Term	Phase 1 (N=627)	Yes (N = 34)	85.3%	14.7%
		Und (N = 48)	35.4	64.6
		No (N = 545)	3.7	96.3
	Phase 2 (N=218)	Yes (N = 14)	92.9	7.1
		Und (N = 33)	57.6	42.4
		No (N = 171)	4.1	95.9
Other Terms	Phase 2 (N=53)	Yes (N = 24)	100.0	0.0
		Und (N = 9)	100.0	0.0
		No (N = 20)	20.0	80.0

other terms of enlistment, 80.0 percent of the No group actually left the Navy. As illustrated in Figure 4-1, intent is a more consistent predictor of reenlistment for the Yes and No groups than for the Undecided group. If personnel in the Undecided group are in their first term of enlistment, they are more likely to leave the Navy than are undecided personnel in other terms of enlistment.

Another way of analyzing these data is to examine the composition of Stay and Leave groups by intent to reenlist, as shown in Table 4-4.

Table 4-4. Comparison of Reenlistment Intent Percentages of Stay and Leave Groups for Three Career Satisfaction Study Samples

Term of Reenlistment	Study Sample	Reenlistment Action	Reenlistment Intent Percentages		
			Yes	Und	No
First Term	Phase 1 (N=627)	Stay (N=66)	43.9%	25.8%	30.3%
		Leave (N=561)	0.9	5.5	93.6
	Phase 2 (N=218)	Stay (N=39)	33.3	48.7	18.0
		Leave (N=179)	0.6	7.8	91.6
Other Terms	Phase 2 (N=53)	Stay (N=37)	64.9	24.3	10.8
		Leave (N=16)	0.0	0.0	100.0

Percentages were computed for intent groups on the basis of who actually stayed in or left the Navy. Results illustrated in Figure 4-2 indicate that about one-third (30.3%) of the Phase 1 first-term personnel who stayed in the Navy did not intend to reenlist a year earlier and about one-fourth (25.8%) were undecided about reenlisting. Of those who actually stayed, less than half

REENLISTMENT ACTIONS FOR THE STAY GROUP BY INTENT
EXPRESSED IN PERCENTAGES OF INTENT GROUP TOTALS

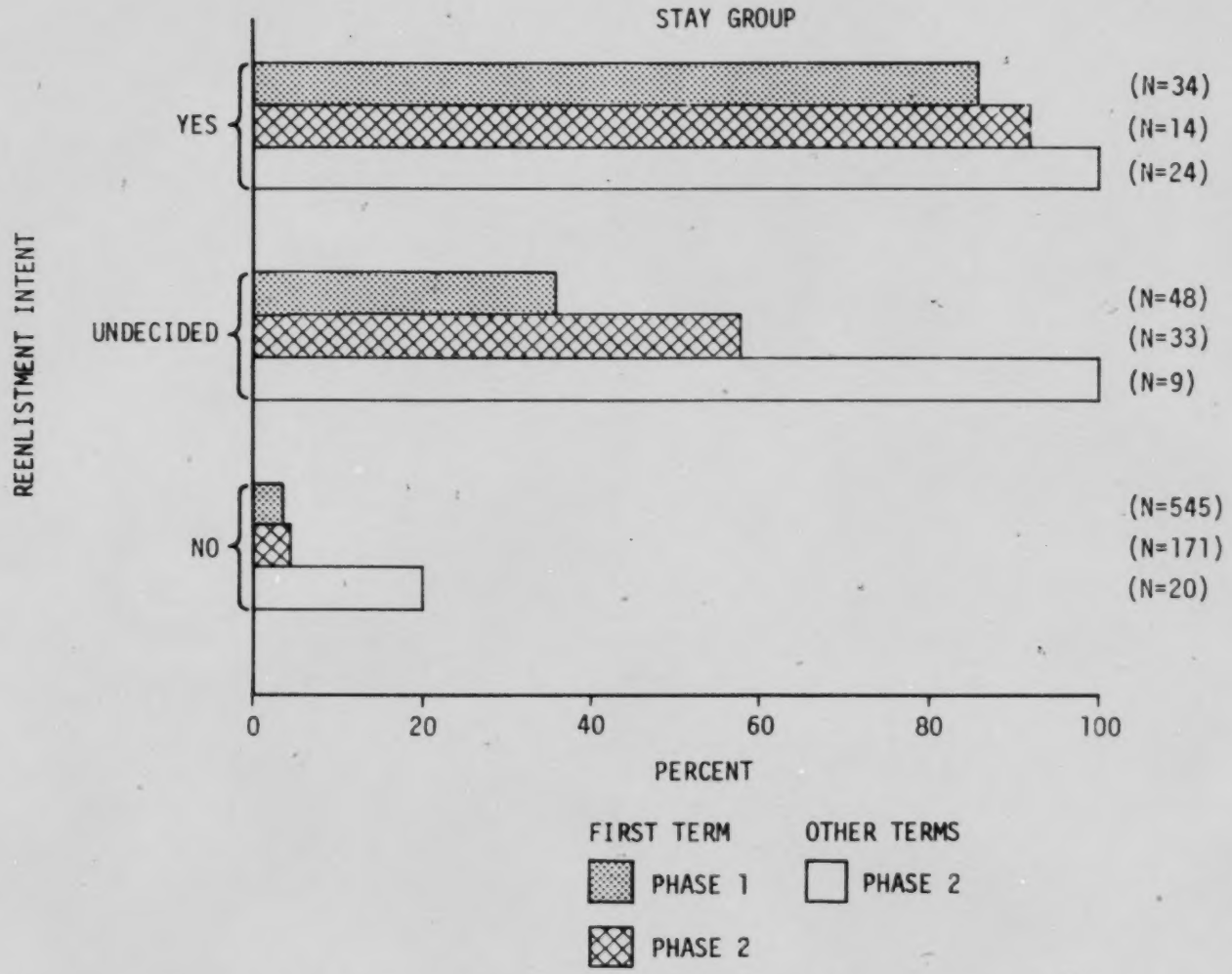


Figure 4-1. Reenlistment Intents of the Actual Stay Group Expressed as Percentages of the Respective Reenlistment Intent Groups by Term of Enlistment and Research Sample.

(43.9%) had intended to reenlist. For Phase 2 first-term personnel, about one-fifth (18.0%) of those who stayed in had not intended to reenlist a year earlier, about half (48.7%) had been undecided, and one-third (33.3%) had intended to reenlist. For personnel in other terms of enlistment who reenlisted, about one-tenth (10.8%) had not intended to reenlist, one-fourth (24.3%) were undecided, and almost two-thirds (64.9%) had intended to reenlist.

4.2 EXPERIMENTAL TEST AND VALIDATION OF HYPOTHESES

Results of the experimental test and validation of hypotheses are presented by category in the order in which they appear in the Career Satisfaction Inventory. Only those variables found to be adequate measures are included in this instrument. Categories in which variables have been grouped are Job, Vital Statistics and Economics, Self-Worth/Esteem and Recognition, Growth and Expectancy, Recruiter/Retention, Family, and Career Counseling and Information.

4.2.1 Job Category Hypotheses

Hypotheses and results for the Job category are shown in Table 4-5. Each hypothesis is presented in abbreviated form as a short title. The prediction of more likely to stay in the Navy was made for all except those followed by the word Leave bracketed in parentheses. Cross-references to the Phase 1 survey (1Q) and Phase 2 survey (2Q) question numbers or to the EMT position number, which remains constant for both phases, are parenthesized in the first column of this table. For survey question numbers, the lower case 'c' denotes that importance and satisfaction have been combined to create a single variable. Percentages shown in the Stay and Leave columns reflect frequencies in the correct association diagonals of four-fold tables. These conventions are used in all tables appearing in Section 4.2.

In descending order of magnitude of Phi coefficient, best predictors for the Phase 1 sample were: Likes being in Navy (Phi = .367; No to Naval Reserves,

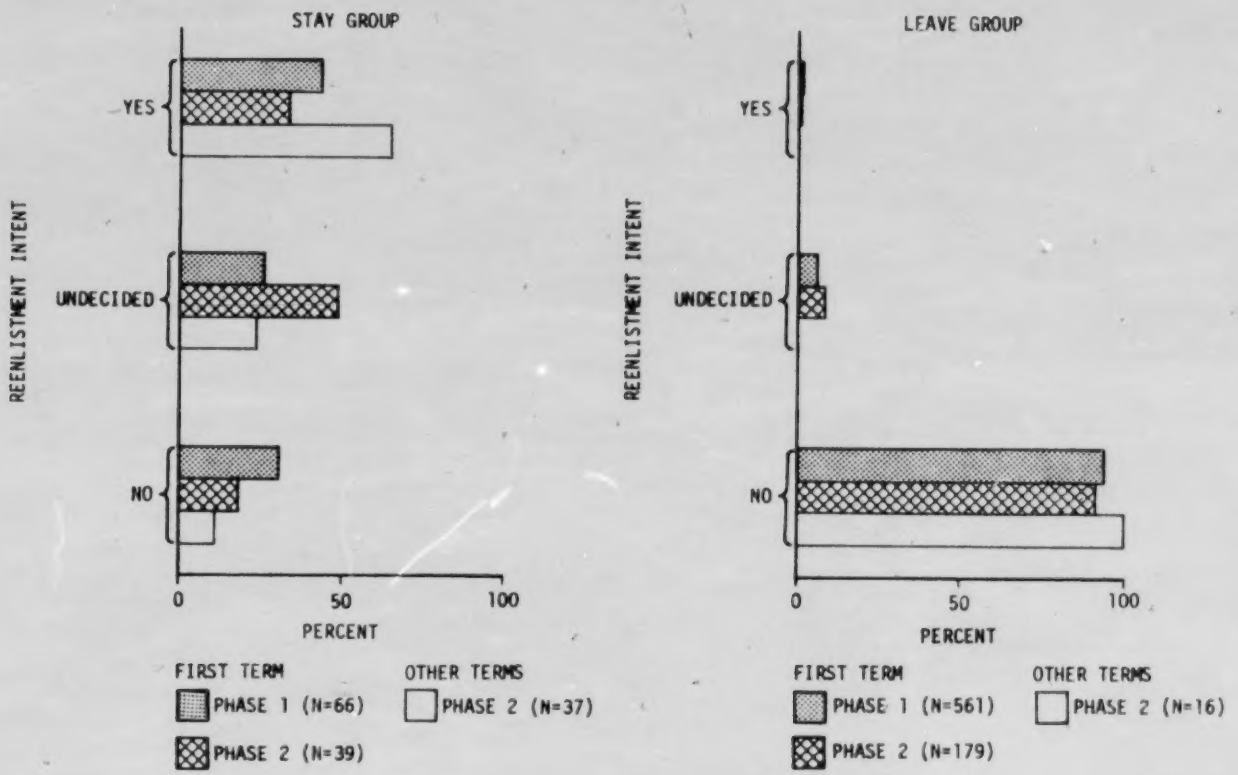


Figure 4-2. Comparison of Reenlistment Intent Expressed as Percentages of the Actual Stay and Leave Groups by Term of Enlistment and Research Phase.

through with Navy (Phi = .302); Likes Navy last six months (Phi = .286); Feels abilities could be better utilized in civilian job (Phi = .211); and Present job interesting (Phi = .193). The second and fourth of these hypotheses were predictive of leaving the Navy, and the other three of staying. Best predictors for the Phase 2 sample were: Likes being in Navy (Phi = .427; Feels abilities could be better utilized in civilian job (Phi = .357); No to Naval Reserves, through with Navy (Phi = .353); Likes Navy last six months (Phi = .287); Present job interesting (Phi = .182); and Assigned to shore duty (Phi = .182). All of these predictors excepting one, Assigned to shore duty, were best predictors for both the Phase 1 experimental test and Phase 2 validation samples. Least predictive hypotheses dealt with job security (c2/147c) and fringe benefits, such as medical and dental services (c22/164c) and Exchange and Commissary service (c23/165c). Draft motivation may account for sample differences obtained relative to shore duty as a predictor or reenlistment.

4.2.2 Vital Statistics and Economics

Hypotheses and results for the Vital Statistics and Economics category are shown in Table 4-6. Best predictors for the Phase 1 sample were: Receiving would influence decision to reenlist (Phi = .279); Receiving VRB (Phi = .239); and Receiving Pro-Pay (Phi = .211). For the Phase 2 sample, best predictors were: Receiving VRB would influence decision to reenlist (Phi = .345); Receiving VRB (Phi = .214); Incentives most attractive are Pro-Pay and VRB (Phi = .197); and I/S with amount of cash would receive as reenlistment bonus (Phi = .197). Rating good only below E-5 was hypothesized to be predictive of staying in the Navy on the basis of growth potential. This hypothesis was not confirmed. For the No group, it was found to be negatively related to reenlistment. Race other than white proved to be the weakest of the significant predictors qualifying as measures of reenlistment.

4.2.3 Self-Worth/Esteem and Recognition Hypotheses

Hypotheses and results for the Self Worth/Esteen and Recognition category are shown in Table 4-7. Best predictors for the Phase 1 sample were: Wife not

Table 4-5. Comparison of Percentages of Correct Association and Phi Coefficients for Career Satisfaction Inventory Job Category Hypotheses.

Cross-Reference (1Q/2Q)	Hypothesis Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient	Stay (N=39)	Leave (N=179)	Phi Coefficient
(97/93)	• Present job interesting	58%	72%	.193***	49%	73%	.182***
(99/95)	• Feels job important to Navy	73	47	.122***	51	68	.156**
(57/32)	• Likes being in Navy	59	87	.367***	51	91	.427***
(50/28)	• Feels abilities could be better utilized in civilian job (Leave)	45	82	.211***	67	77	.357***
(70/68)	• Likes Navy last six months	56	82	.286***	46	84	.287***
(37/37)	• No to Naval Reserves, through with Navy (Leave)	80	67	.302***	82	64	.353***
(c1/146c)	• I/S with choice of job in Navy[1]	71	60	.194***	69	50	.146**
(c2/147c)	• I/DS with security felt in job[2] (Leave)	95	16	.100**	92	21	.133**
(c22/164c)	• I/S with medical and dental services[1]	71	51	.134***	72	44	.112*
(c23/165c)	• I/S with Exchange and Commissary services[1]	73	38	.070*	77	41	.140**
(26/10)	• Assigned to shore duty	9	96	.077*	49	73	.182***

*p <.10
**p <.05
***p <.01

[1]I/S stands for Important and Satisfied.

[2]I/DS stands for Important and Dissatisfied.

Table 4-6. Comparison of Percentages of Correct Association and Phi Coefficients for Career Satisfaction Inventory Vital Statistics and Economics Category Hypotheses.

Cross-Reference (1Q/2Q) or (EMT)	Hypotheses Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient	Stay (N=39)	Leave (N=179)	Phi Coefficient
(21/19)	• Receiving VRB	70%	68%	.239***	69%	59%	.214***
(32/34)	• Incentives most attractive are Pro-Pay and VRB	52	68	.128***	51	73	.197***
(36/36)	• Receiving VRB would influence decision to reenlist	74	69	.279***	85	60	.345***
(c16/159c)	• I/S with amount of cash would receive as reenlistment bonus[1]	71	55	.162***	62	64	.197***
(72)	• Race other than white	12	95	.094**	18	92	.122*
(74)	• Citizen not U.S. Native born	11	98	.175***	8	98	.141**
(194)	• Receiving Pro-Pay	8	100	.211***	5	99	.115*
			(N=545	(No)		(N=171)	
(254)	• Rating good only below E-5	5	59	-.138***	43	23	-.156**

*p <.10
**p <.05
***p <.01

[1] I/S stands for Important and Satisfied.

Table 4-7. Comparison of Percentages of Correct Association and Phi Coefficients for Career Satisfaction Inventory Self-Worth/Esteem and Recognition Category Hypotheses.

Cross-Reference (1Q/2Q) or (EMT)	Hypothesis Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient	Stay (N=39)	Leave (N=179)	Phi Coefficient
(55/30)	• Making contribution to society	70%	50%	.124***	74%	45%	.152**
(69/67)	• Treated fairly in Navy	38	80	.131***	38	84	.213***
(81/76)	• Treated as individual human being	23	91	.134***	33	88	.220***
(83/78)	• Feels treated as person worthy of respect	38	85	.181***	33	88	.220***
(62/63)	• Wife not proud to be Navy (Leave)	44	86	.245***	46	77	.201***
(91/87)	• Navy makes good use of shipmates' talents	21	88	.081*	21	92	.151**
(65/69)	• Important to be regarded as good Navyman by superiors	89	35	.161***	85	35	.163**
(98/94)	• Good use of abilities in present job assignment	38	77	.109***	44	78	.191***
(c3/148c)	• I/S with extent feels useful in job[1]	64	55	.113***	79	58	.288***
(c5/150c)	• I/S with recognition for doing a good job[1]	65	63	.175***	67	58	.186***
(c6/151c)	• I/S with attitude of supervisors toward self and others[1]	61	59	.124***	72	54	.195***

*p <.10
**p <.05
***p <.01

[1]I/S stands for Important and Satisfied.

proud to be Navy (Phi = .245); Feels treated as person worthy of respect (Phi = .181); I/S with recognition for doing a good job (Phi = .175); Important to be regarded as good Navyman by superiors (Phi = .161); and Treated as individual human being (Phi = .134). For the Phase 2 sample, best predictors were: I/S with extent feels useful in job (Phi = .288); Treated as individual human being (Phi = .220); Feels treated as person worthy of respect (Phi =.220); Treated fairly in Navy (Phi = .213); and Wife not proud to be Navy (Phi = .201). Results about wives shown in Table 4-7 are for the total sample. The reason for not taking marital status into account was to simplify scoring of the Career Satisfaction Inventory by using a scoring technique applicable to all Navy personnel. Hypotheses were also tested using only married personnel, and stronger effects were obtained in this test.

The three best predictors common across the Phase 1 and Phase 2 samples related to feelings of self-worth and esteem. Least predictive among hypotheses in this category was Navy makes good use of shipmates' talents.

4.2.4 Growth and Expectancy Hypotheses

Hypotheses and results for the Growth and Expectancy category are shown in Table 4-8. Best predictors for the Phase 1 sample were: Plans to continue education in Navy (Phi = .210); Given opportunity for Navy location choice (Phi = .193); I/S with chances for promotion (Phi = .156); and Dissatisfied with initial job classification (Phi = .151). For the Phase 2 sample, best predictors were: Dissatisfied with present job (Phi = .171); Navy work experience advantage in getting civilian job (Phi = .153); and Given opportunity for Navy location choice (Phi = .145). The two best predictors common across samples dealt with continuing education and choice of Navy location. Least predictive among predictors qualifying as measures concerned the feeling that Navy service is a valuable experience.

Table 4-8. Comparison of Percentages of Correct Association and Phi Coefficients for Career Satisfaction Inventory Growth and Expectency Category Hypotheses.

Cross-Reference (1Q/2Q) or (EMT)	Hypothesis Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient	Stay (N=39)	Leave (N=179)	Phi Coefficient
(47/26)	• Navy work experience advantage in getting civilian job	70%	54%	.147***	64%	56%	.153**
(77/75)	• Feels service in Navy is valuable experience	74	42	.102**	74	40	.115*
(110/113)	• Plans to continue education in Navy	71	62	.210***	54	68	.171**
(71/74)	• Given opportunity for Navy location choice	50	77	.193***	64	55	.145**
(92/88)	• Abilities/desires not considered in rating assignment (Leave)	58	60	.106***	77	41	.140**
(93/89)	• Dissatisfied with initial job classification (Leave)	77	47	.151***	77	39	.124*
(94/90)	• Dissatisfied with present job assignment (Leave)	79	42	.129***	87	40	.216***
(c14/157c)	• I/S with chances for promotion[1]	80	45	.156***	67	50	.126*

*p < .10
**p < .05
***p < .01

[1] I/S stands for Important and Satisfied.

4.2.5 Recruiter/Retention Hypotheses

Hypotheses and results for the Recruiter/Reenlistment category appear in Table 4-9. Three hypotheses were tested using the Phi coefficient. Ordering was similar for the Phase 1 and Phase 2 samples. The best predictor was: Would you reenlist if you had to make decision today (Phi = .549, Phi = .486). The least predictive was I/S with opportunities to reenlist for duty in specific unit of choice (Phi = .149, Phi = .156). Chi-square was used to determine significance of difference for Intends to reenlist, a three-response item. Contributions to Chi-square across Yes, Undecided, and No groups ordered in the same way for both samples for the Stay and Leave groups. In descending order, contributions (Phase 1/Phase 2) were Stay-Yes (180.50/44.10), Stay-Undecided (28.28/29.09), Stay-No (24.34/18.19), Leave-Yes (21.4/9.59), Leave-Undecided (3.32/6.33) and Leave-No (2.86/3.96). Divergences from chance expectation were greater for the Phase 1 sample than for the Phase 2 sample. When the same test was made for the sample of personnel in terms other than first, a significant difference was also obtained (Chi-square = 37.82, $p < .01$). Contributions ordered differently for this sample, as follows: Leave-No (16.42), Leave-Yes (7.25), Stay-No (7.11), Stay-Yes (3.14), Leave-Undecided (2.72), Stay-Undecided (1.18). Leave-Intent groups tended to diverge more from chance expectation than did the Stay-Intent groups.

4.2.6 Family Hypotheses

Hypotheses and results for the family category are shown in Table 4-10. Best predictors for the Phase 1 sample were: Spouse's feelings about Navy would influence reenlistment decision (Phi = .172) and Accompanied by spouse (Phi = .164). For the Phase 2 sample, best predictors were: Accompanied by spouse (Phi = .248) and One or more dependents (Phi = .241). Prediction order varied across samples for the other hypotheses in this category as discussed earlier; these computations were made using the total Phase 1 and Phase 2 samples of first-term personnel. Negative Phi-coefficients were obtained for Spouse least likes family separation, amount of money made, and changes of station (60/43), which indicates that the Leave hypothesis was not confirmed even though the predictive relationship was significant.

Table 4-9. Comparison of Percentages of Correct Association and Phi or Chi-Square Coefficients for Career Satisfaction Inventory Recruiter/Retention Category Hypotheses.

Cross-Reference (1Q/2Q) or (EMT)	Hypothesis Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient or Chi-Square	Stay (N=39)	Leave (N=179)	Phi Coefficient or Chi-Square
(79/70)	• Would encourage person to join Navy or point out pros and cons	77%	51%	.176***	79%	47%	.205***
(31/33)	• Intends to reenlist						
	- Yes	85	15	Chi-Square 260.54*** df = 2	93	7	Chi-Square 111.26*** df = 2
	- Undecided	35	65		58	42	
	- No	4	96		4	96	
(39/39)	• Would reenlist if had to make decision today	48	98	.549***	44	96	.486***
(c12/155c)	• I/S with opportunities to reenlist for duty in specific unit of choice[1]	61	63	.149***	54	66	.156**

*p < .10
**p < .05
***p < .01

[1] I/S stands for Important and Satisfied.

Table 4-10. Comparison of Percentages of Correct Association and Phi Coefficients for Career Satisfaction Inventory Family Category Hypotheses

Cross-Reference (1Q/2Q) or (EMT)	Hypothesis Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient	Stay (N=39)	Leave (N=179)	Phi Coefficient
(56/31)	• Parents (guardian) feelings about Navy negative (Leave)	91%	23%	.104***	97%	25%	.212***
(17/15)	• One or more dependents	53	65	.113***	67	64	.241***
(63/61)	• Spouse's feelings about Navy would influence reenlistment decision	50	75	.172***	49	74	.187***
(58/41)	• Accompanied by spouse	47	76	.164***	51	78	.248***
(59/42)	• Spouse most likes retirement benefits, dependent medical benefits, and Exchange and Commissary services	53	70	.153***	49	74	.187***
(60/43)	• Spouse least likes family separation, amount of money made, and changes of station (Leave)	44	32	-.153***	46	30	-.196***

*p <.10
**p <.05
***p <.01

4.2.7 Career Counseling and Information Hypotheses

Hypotheses and results for the Career Counseling and Information category are shown in Table 4-11. Best predictors for the Phase 1 sample were: Group counseling would be a good idea (Phi = -.253) for the Undecided group; Career counselor helpful in providing information (Phi = .193); Career Counseling Program felt valuable (Phi = .188); and During last interview discussed information of interest (Phi = .175). Best predictors for the Phase 2 sample were: Group counseling would be a good idea (Phi = -.433) for the Undecided group; During last interview discussed information of interest (Phi = .292); Career counselor helpful in providing information (Phi = .275); and Career Counseling Program felt valuable (Phi = .239). All of these best predictors were common across samples. The largest Phi coefficients were obtained for the group undecided about reenlistment and these coefficients were negative. The smaller sample size accounts for the lesser significance. This indicates that favoring group counseling is associated with leaving rather than staying in the Navy, which is of particular interest since roughly half of both the total Phase 1 and Phase 2 samples (48.8% and 59.1% respectively) indicated that group counseling was a good idea. It would appear that those first-term personnel within six months or less of EAOS are less interested in group sessions. The importance of individual counseling for at least the undecided first-term personnel is emphasized by these results. The least effective predictor in this category concerned satisfaction with information about job and future in it (106/125).

Counselor preparation, willingness to listen and help, and attitude appear to be factors favoring reenlistment. Personnel who perceive that their career counselors are not interested in helping them make the most out of life are likely to leave the Navy. The importance of an effective Career Counseling Program for retention is underscored by these results.

4.3 DIFFERENTIATION BETWEEN STAY AND LEAVE GROUPS

Differentiation between Stay and Leave groups was accomplished by combining correct associations for each individual by hypothesis category. One point

Table 4-11. Comparison of Percentages of Correct Association and Phi Coefficients for Career Satisfaction Inventory Career Counseling and Information Category Hypotheses.

Cross Reference (1Q/2Q)	Hypothesis Short Title	Phase 1 Experimental Test			Phase 2 Validation		
		Stay (N=66)	Leave (N=561)	Phi Coefficient	Stay (N=39)	Leave (N=179)	Phi Coefficient
(142/110)	• Career Counseling Program felt valuable	80%	50%	.188***	87%	43%	.239***
(155/132)	• Chats often with career counselor, other than an interview	21	92	.133***	31	89	.221***
(144/111)	• Career counselor helpful in providing information	74	57	.193***	69	66	.275***
(158/103)	• Career counselor well prepared for last interview	70	45	.094**	72	57	.221***
(161/130)	• Career counselor willing to listen and help solve problems	45	76	.149***	54	67	.166**
(163/131)	• Career counselor not interested in helping make most out of life (Leave)	97	24	.156***	87	29	.142**
(173/102)	• During last interview discussed information of interest	65	63	.175***	64	72	.292***
(106/125)	• Satisfied with information about job and future in it	36	76	.090**	31	83	.130*
(174/59)	• Information received through career counseling valuable to family	30	83	.110***	18	93	.142**
			(N=48)	(Undecided)		(N=33)	
(136/109)	• Group counseling would be a good idea	53	23	-.253*	53	7	-.433**
(c27/167c)	• I/S with attitude of career counselor[1]	68	51	.118***	79	44	.181***

*p <.10
**p <.05
***p <.01

[1] I/S stands for Important and Satisfied.

was assigned for each correct association excepting for "Intends to reenlist," which was scored 2 for Yes, 1 for Undecided, and 0 for No. The two hypotheses that were confirmed only for one intent group were scored only for personnel expressing the appropriate intent. Using this scoring procedure, the maximum number of points that could be obtained for the Job category was 11; for Vital Statistics and Economics, 8; for Self-Worth/Esteem and Recognition, 11; for Growth and Expectancy, 8; for Recruiter/Retention, 5; for Family, 6; and for Career Counseling and Information, 11. A Total Score was obtained by summing category scores for each individual. A Strength of Feeling measure was developed as a means of assessing overall motivational tone and identifying individuals who had strong feelings about the Navy. It was hypothesized that personnel with stronger feelings would be more likely to reenlist. Scores were derived from the 11 Importance/Satisfaction hypotheses. Positive importance and extreme high or extreme low satisfaction were required to accumulate points for this measure.

Results indicating the degree to which obtained scores differentiated between Stay and Leave groups are shown in Table 4-12. Statistically significant differences ($p < .01$) between means were obtained for all experimental test and validation sample comparisons. Stay group means were higher for the Phase 2 sample than for the Phase 1 sample for all categories except Vital Statistics and Economics and Recruiter/Retention. Leave group means were higher for the Phase 2 sample than for the Phase 1 sample for four of the seven categories, with Vital Statistics and Economics, Family, and Career Counseling being lower for the Phase 2 sample. One reason for the higher means for the Vital Statistics and Economics category in the Phase 1 time frame might have been that military pay scales were markedly increased late in 1971. Self-Worth/Esteem and Recognition, Growth and Expectancy, and Job categories means were higher for the Phase 2 sample, as compared with Phase 1 sample means. One reason might be the positive influence of the Navy Human Resource Management Program which was being implemented full-scale during this time frame. These categories are actionable directly within the unit chain of command.

Table 4-12. Comparisons of Means for Category, Total, and Strength of Feeling Scores for Stay and Leave Groups by Study Sample.

Category/Type of Score	Study Sample/Reenlistment Action								
	First Term						Other Terms		
	Phase 1 Experimental Test			Phase 2 Validation			Phase 2 Cross-Validation		
	Stay	Leave	F	Stay	Leave	F	Stay	Leave	F
• Job	6.91	4.01	107.605***	7.05	4.15	50.475***	7.19	4.75	12.805***
• Vital Statistics and Economics	3.26	2.02	45.633***	3.08	1.77	23.863***	2.16	3.13	5.138**
• Self-Worth/Esteem and Recognition	5.94	3.94	36.573***	6.38	4.09	24.893***	6.78	5.31	4.007*
• Growth and Expectancy	5.59	3.71	57.664***	5.64	4.13	18.043***	5.84	5.19	1.703
• Recruiter/Retention	3.00	.95	245.088***	2.92	1.00	116.929***	3.86	1.38	50.397***
• Family	3.50	2.23	23.218***	3.67	2.15	18.151***	5.00	4.69	.443
• Career Counseling and Information	6.00	3.83	40.269***	6.15	3.58	30.634***	4.86	5.19	.171
• Total	34.20	20.70	145.302***	34.90	20.87	69.655***	35.70	29.63	7.298***
• Strength of Feeling	7.80	5.44	33.423***	7.90	5.53	20.659***	7.38	5.19	7.922***

*p <.10
**p <.05
***p <.01

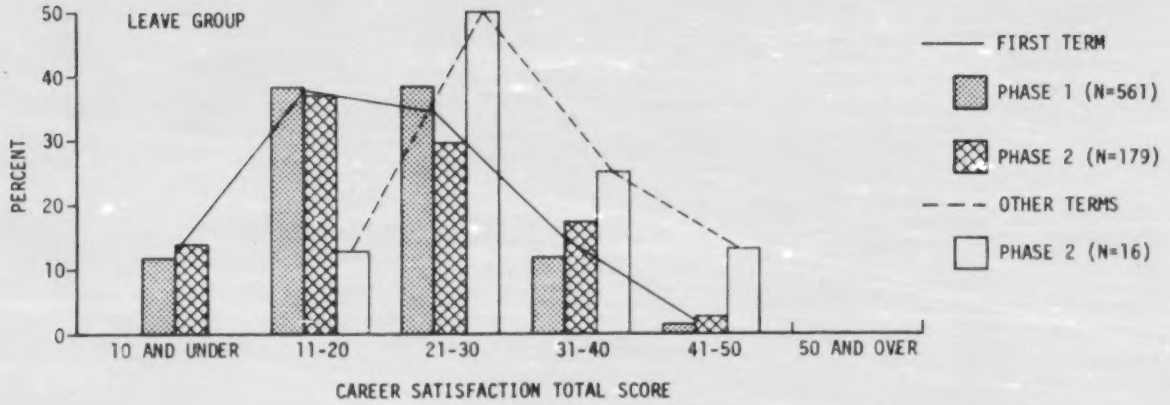
Total score means also differed by a statistically significant amount. The experimental test sample means for the Stay group (Mn = 34.20) and the Leave group (Mn = 20.70) differed by 13.50 points ($p < .01$). The validation sample mean for the Stay group (Mn = 34.90) differed from that of the Leave group (Mn = 20.87) by 14.03 points ($p < .01$). The size of this difference is important because if the spread were small, it could mean that the category scores were functioning adversely and obscuring overall predictive power of the technique. The size of the spread also adds to the face validity of the technique. If face validity were lacking, practical application of the technique would probably be hampered even if the differences obtained were found to be statistically significant. The Strength of Feeling measure also yielded statistically significant differences ($p < .01$) between means for the experimental test and validation sample Stay and Leave groups; however, the absolute differences were smaller.

These results were cross-validated using the remaining independent sample of Phase 2 personnel in terms of enlistment other than the first. While this sample had a drawback in that it differed from the other samples with respect to age and length of time in the Navy, it had one major advantage. If results cross-validated, greater generality could be inferred than if the cross-validation sample were comprised only of first-term personnel. Results are also shown in Table 4-12. Difference between Stay and Leave groups means for the cross-validation sample were statistically significant for four categories--Recruiter/Retention ($p < .01$), Job ($p < .01$), Vital Statistics and Economics ($p < .05$) and Self-Worth/Esteem and Recognition ($p < .10$)--and for Total Score ($p < .01$) and Strength of Feeling ($p < .01$). A relatively small number of personnel (N=53) were available for inclusion in the cross-validation sample. If this sample had been larger, the level of significance obtained might have been greater.

Distributions of Total Scores for the three samples are summarized in Table 4-13 and Figure 4-3. Appendix B contains complete distributions for all measures. Leave group distributions for all three samples extend one class interval below Stay group distributions. Experimental test distributions appear to be relatively symmetrical. The validation Stay group distribution tends to be skewed

Table 4-13. Summary Comparisons of Total Score Distributions for Stay and Leave Groups Within Each of Three Target Population Study Samples

Term of Enlistment	Study Sample	Reenlistment Action	Percentages/Total Score Class Intervals					
			≥10	11-20	21-30	31-40	41-50	≥50
First Term	Phase 1 (N=627) Experimental Test	Stay (N=66)		4.5%	25.8%	42.4%	25.8%	1.5%
		Leave (N=561)	12.8%	38.2	35.1	12.3	1.6	
	Phase 2 (N=218) Validation	Stay (N=39)		7.7	23.1	33.3	35.9	
		Leave (N=179)	14.0	37.4	29.6	16.8	2.2	
Other Terms	Phase 2 (N=53) Cross-Validation	Stay (N=37)			24.3	43.3	32.4	
		Leave (N=16)		12.5	50.0	25.0	12.5	



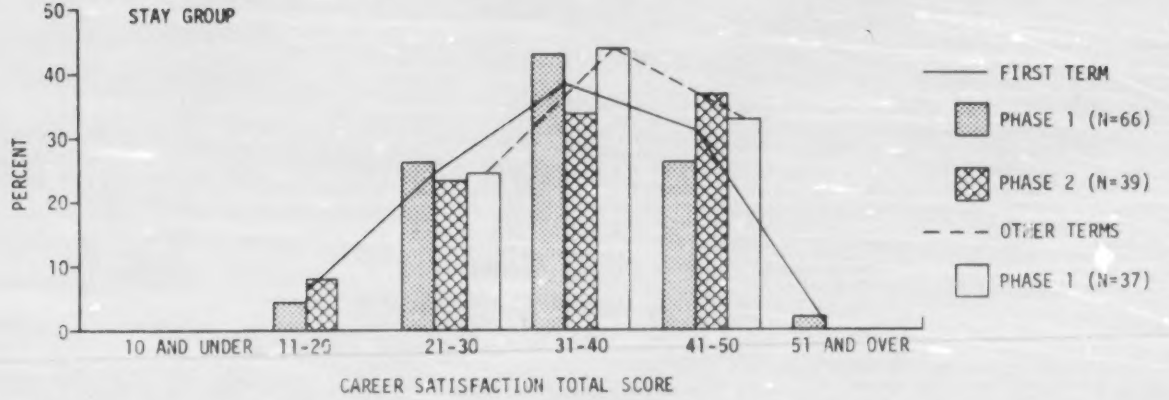


Figure 4-3. Comparison of Career Satisfaction Distributions by Term of Enlistment for Actual Stay and Leave Groups.

toward the lower end and the Leave group distribution, toward the upper end. The cross-validation Leave group distribution tends to be skewed toward the upper end and the Stay group distribution is attenuated. Figure 4-3 clearly shows that satisfaction tends to be lower for first-term personnel than for personnel in other terms of enlistment regardless of whether personnel stay in or leave the Navy. Also, those who stay in the Navy report greater satisfaction than those who leave regardless of term of enlistment.

Comparison of Total Score distributions appearing in Table B-9 (see Appendix B) shows that 3.2 percent (N=2) of the experimental test Stay group (N=66) and 7.7 percent (N=3) of the validation Stay group (N=39) obtained a Total Score less than the means for the respective Leave groups. For the experimental test Leave group (N=561), 5.3 percent (N=30) obtained a Total Score greater than the mean for the Stay group; for the validation Leave group (N=179), 10.6 percent (N=19), scored above the Stay group mean. For the cross-validation Stay group (N=37), none scores below Total Score means for the two samples of first-term personnel; for the Leave group (N=16), 25 percent (N=4) scored above the first-term Stay group means and 12.5 percent scored above the other terms Stay group mean. These findings indicate that Total Score discriminates between stay and leave behavior in a relatively clear-cut manner.

SECTION 5 - DISCUSSION OF RESULTS

Research results have demonstrated the feasibility of developing a technique for measuring career satisfaction of Navy enlisted personnel. This technique uses attitudinal data and personnel records to predict actual reenlistment behavior which permits identification of target populations receptive to reenlistment. Based on likelihood of reenlistment and the Navy's personnel needs, a cost-effective plan for applying retention effort and allocating career counseling resources can be developed. The chances of retaining satisfied Navy personnel are greater than for retaining dissatisfied personnel. Of those personnel who are highly satisfied with the Navy, about half do not reenlist. This indicates that a top-down strategy for application of retention efforts and career counseling resources would probably yield the best return to the Navy. In such a strategy, resources would be first applied to those most satisfied. Efforts would be made to determine if there were any influences negative to reenlistment impacting on these personnel. If any such influences were found, positive actions to counter them would be identified and implemented. Resources would be applied downward through the satisfaction distribution with the goal of reaching all personnel regardless of satisfaction. If resources were limited, the least effort and the smallest amount of resources would have been devoted to those least likely to reenlist. This would ensure that available effort and resources would have been applied proportional to the likelihood of retention payoff.

5.1 CAREER SATISFACTION

Career satisfaction is a construct basic to this research. This construct differs from job and work satisfaction in that it is larger in scope. A career is a life-long course of action by means of which individuals apply their abilities and experience in a purposeful manner. Job and work satisfaction are generally limited to efforts directed at earning a living. A career is usually directed toward earning a livelihood, but this need not be the case. For example, those who are supported by others or by wealth may build careers as volunteers, public servants, or philanthropists.

The word "career" is also used in a narrower sense. For example, a profession of occupational field is called a career. Progressive achievement through the personnel structure of an organization is also called a career. In the Navy, career is generally used to mean a "career in the Navy." For enlisted personnel the length of a Navy career is generally assumed to be about 20 years. Thus an individual who enlists early in life can complete a Navy career before the age of 40. All of these uses of the word "career" are too limited in scope for them to be appropriate for use in this research.

Careers provide satisfaction that results from the fulfillment of individual wants, needs, or expectancies, with due consideration given to all aspects of life. Job and work satisfaction place emphasis on wants, needs, or expectancies that can be satisfied in an employment setting. Most people spend only about half of their waking hours earning a living. If what goes on in the other half of each day is dissatisfying, it can spill over and influence satisfaction with job or work. Serving in the Navy is a way of life that requires greater commitment than is called for in an ordinary 40-hours-a-week job. Navy work can be difficult and dangerous. Going to sea means living and working 24 hours a day in the ship's environment and being separated from family for extended periods of time. While men are on sea duty, families must take care of themselves, and when husbands are on shore duty and living at home, families must be prepared to move frequently. These are the major reasons why the focus in this research is on career satisfaction rather than on job or work satisfaction.

5.2 CAREER SATISFACTION AND ORGANIZATIONAL EFFECTIVENESS

Career satisfaction is a major determiner of organizational effectiveness because it influences the degree to which organizational goals can be achieved. Members of organizations must be motivated to perform well and to remain effective members if organizational goals are to be met.

Research investigators and working managers have theoretical, empirical, and practical evidence that satisfaction influences retention, turnover, absenteeism, and organizational effectiveness. Individuals vary with respect to what is required to achieve satisfaction. For some "three squares and a flop" will satisfy and for others a great deal is not enough. Most individuals can find satisfaction within limits reasonable enough to be implemented in most practical situations.

A number of techniques designed to increase satisfaction and improve morale and esprit have been developed. Government, business, and industry have implemented many of these techniques in an effort to improve the effectiveness of their organizations. The Navy has implemented a number of these techniques through its Human Resource Management Program. Major program objectives are to increase fleet readiness, to strengthen the chain of command, to improve leadership and management skills Navy wide, and to improve the quality of life for all Navy personnel. The Navy Career Counseling Program also makes use of these techniques with emphasis on retention of quality enlisted personnel, particularly those in the critical specialities. Working in conjunction with other Navy personnel support agencies, these two programs can assist the chain of command in increasing organizational effectiveness through use of techniques designed to improve career satisfaction of Navy personnel.

Maintaining an adequate supply of Navy manpower is required to ensure fleet readiness. The career satisfaction measurement technique developed in this research can assist the Navy in retaining an adequate supply because it provides a way to determine likelihood of reenlistment. To maintain an adequate supply, the flow of manpower through the Navy must be well managed. Tangible incentives, such as pay, bonuses, and fringe benefits, are widely used to manage manpower supply. Intangible incentives, such as career satisfaction, can also be used to manage manpower supply. Tangible incentives have the drawback that funds must be obtained in order to implement them. Intangible incentives can be provided at little or no additional monetary cost to the Navy. If the Navy were to make greater use of intangible incentives, management of the flow of manpower through the Navy could be effectively accomplished with little, if any, need to obtain additional funds.

5.3 FACETS OF CAREER SATISFACTION

The facets of career satisfaction investigated in this research include the categories for which results were presented in Section 4. Each facet provides a focus for identifying positive actions that can be taken to improve personnel satisfaction and increase retention.

5.3.1 Job Facet

The Job facet is key to increasing retention because job satisfaction is an important factor influencing reenlistment. Because holding a job in the Navy is also a way of life, overall satisfaction is considered a part of this facet. Those likely to reenlist find their present jobs interesting and important to the Navy. They feel that their abilities are being well utilized and are satisfied with their choice of job assignment. Job requirements vary but at least limited change is possible for all jobs. The potential to bring about change by applying good management techniques, such as the restructuring of work and conveying a sense of task importance, exists at the unit level. The Human Resource Management Program has tools to assist units to effect this potential. Job satisfaction could be improved if these tools were used to greater advantage by all Navy units.

5.3.2 Vital Statistics and Economics Facet

Vital Statistics and Economics are an important facet influencing retention. Personnel receiving or motivated to receive special pay or bonus incentives are more likely to reenlist. Race and place of birth also influence retention. Actionability at the unit level is marginal in these areas because management responsibility rests with Navy policy makers. Monetary incentives appear to have a strong influence on reenlistment and use of these incentives should be continued. However, it should be kept in mind that the impact of monetary incentives can only provide short-term solutions to long-term problems. If incentives are used as tools to manage the flow of manpower through the Navy, impact should be continually assessed to ensure that it remains beneficial across the Navy. Perceived unfair distribution of incentives or real or perceived erosion of benefits can negatively influence the attitudes of personnel.

When retirement benefits are the focus of such perceptions, it can have a particularly adverse effect on the attitudes of career personnel and their families. The Navy's Race Relations and Equal Opportunity Program may be having a positive influence on retention of minority personnel, but modifying selection procedures to take advantage of race and place of birth may be impractical. However, encouraging advancement of personnel to E-5 and above is actionable at the unit level. Greater emphasis should be placed on ensuring that all qualified personnel in ratings good only below E-5 take full advantage of Navy conversion opportunities.

5.3.3 Self-Worth/Esteem and Recognition Facet

The Self-Worth/Esteem and Recognition facet provides a way to increase retention at minimal financial cost to the Navy. The application of sound leadership and management principles is required to achieve this clearly actionable facet. Positive actions can be taken at the unit level and thus large numbers of personnel can be reached in a relatively short period of time. For these reasons, this facet should be of great importance to Navy policy makers. Personnel more likely to reenlist feel they are treated fairly, with respect, and as individual human beings. They also feel useful in their jobs, well regarded by their superiors, recognized for doing a good job, and that they are making a contribution to society by serving in the Navy. If they feel that their wives are not proud to be Navy, they are likely to leave. If wives perceive that their husbands are being treated unfairly by their commands or the Navy, or if wives feel unfairly treated themselves, such wives are unlikely to feel proud to be Navy. Every effort should be made to ensure that feelings of personal worth and dignity are cultivated in all personnel and their families. Division Officers and the unit chain of command have the potential, authority, and position required to cultivate such feelings. The Leadership and Management Training Program, the Human Resource Management Program, and the Navy Career Counseling Program are resources which can be used to assist commands in realizing unit potential in these areas. Units should be strongly encouraged to take greater advantage of the assistance offered by these programs.

5.3.4 Growth and Expectancy Facet

The Growth and Expectancy facet is important for retention but major responsibility falls outside the unit level. For example, choice of location, initial job classification, and job assignment are influenced by Navy needs as well as individual desires. Providing educational assistance to Navy personnel costs money, and when funds are short, Navy policy makers may rightly curtail use of funds in this manner. However, if personnel and their wives are kept well informed about the Navy needs and funding problems, they may accept necessary limitations more willingly. The importance of explaining why limitation is necessary cannot be underestimated. Limitations which appear to be arbitrary should definitely be avoided. Providing this type of information clearly falls within the area of responsibility of the chain of command, strongly supported by the Career Counseling Program. Assisting personnel to see the value of their service experience and to understand how their Navy work experience can be an advantage in getting a civilian job are also career counseling functions. While the latter may appear counterproductive to increasing Navy retention, consider the fact that a Navy career of 20 to 30 years is only about half of the total career life of the individual. Some career personnel are leaving the Navy because they feel they are in dead-end jobs with nothing further to be learned or gained by staying in the Navy. Under these circumstances, personnel tend to feel that it is in their own best interests to return to the civilian world and work at building a career that shows more promise. When such personnel leave the Navy, they are not likely to become good Naval ambassadors to the civilian community. This could have adverse effects on the enlistment of future Naval personnel. Improved career progression information and the larger career satisfaction perspective can assist the Navy in meeting today's manpower needs because individuals will be assisted in gearing themselves to think about their Navy careers as portable. Individuals who feel this way about their careers are more likely to be high performers well motivated to do a good job because they have a personal investment in their performance. If the Navy were to take full advantage of the incentive power of this type of personal investment, personnel satisfaction could be improved and retention increased.

5.3.5 Recruiter/Retention Facet

Tne Recruiter/Retention facet provides the best predictors of reenlistment, yet little direct action at the unit level is possible in this area. However, personnel in the Undecided reenlistment intent group constitute a key group on which to focus actions identified under other facets. Opportunity to reenlist for duty in a specific unit of choice increases likelihood of reenlistment. Steps should be taken to ensure that this opportunity is provided to all personnel to the fullest extent that Navy needs permit. Personnel likely to reenlist report that they would encourage others to join the Navy, or at least point out the pros and cons to them. It might be possible to arrange for recent reenlistees to talk in a similar vein with personnel approaching the reenlistment decision. This possibility needs to be systematically explored to determine its potential for increasing reenlistments. However, encouragement and concern about personnel should not be limited to the time just before reenlistment. The first six months after joining a unit is perhaps the most crucial time for showning concern because this is the period in which overall satisfaction with Navy life appears to decline most sharply. If personnel feel that they are taken for granted until just before reenlistment decision time, interest and concern expressed at that time may not be credible. Every individual is important to the operation, but few are made to feel that way. Some superiors wait to tell their subordinates how important each and every one is to the Navy until it is time for them to sign for more years of service. Superiors who wait are likely to find that the personnel they want to reenlist are tuned out because they were turned off long ago.

5.3.6 Family Facet

The Family facet has a very important influence on retention. By and large, the Navy enlists a single individual and reenlists a married one. Dissatisfaction of family members with Navy life tends to spill over into the job and work setting. This even carries over from the past in that personnel whose parents or guardians had negative feelings about the Navy were less likely to reenlist. Spouses' feelings about the Navy are important because research results show

that personnel who reenlisted reported a year earlier that their spouses' feelings about the Navy would influence their reenlistment decisions.

The Navy should take action to ensure that spouses' experiences with service life are as favorable as possible. If difficult or unfavorable experiences are unavoidable, reasonable explanation should be provided to those affected and assistance extended to lessen the difficulty or alleviate the unfavorable circircumstance. Wives need fundamental information about the Navy to give them a knowledge base and feeling of security about the life they can expect to lead. Lack of knowledge may lead to the formation of misconceptions that foster dissatisfactions which can cause wives to encourage their husbands to leave the Navy. A number of locations have instituted Navy Wives Information Schools designed to provide information and demonstrate to wives that the Navy cares about them. The Wives Ombudsman Program and Navy Family or Personal Services Offices have been chartered to provide such assistance. These resources lie outside the unit chain of command and the Command Retention Team concept. However, commands should encourage two-way communication with the families via the ombudsman. This can then be used to elicit questions from the wives as well as disseminate information to them about sources of aid. Another approach would be to have women in the Wives Ombudsman Program attend a Career and Information Counseling (CIAC) course to increase their knowledge and communication skills.

Personnel likely to reenlist reported that their spouses liked retirement benefits, dependent medical benefits, and Exchange and Commissary services most about the Navy. Despite these findings, perhaps Commissaries at stateside locations should be closed because they are reported not to be allowed to sell goods at a price more than 5 percent below the average price in the area in which they are located. Personnel likely to reenlist reported that their spouses least liked family separation, amount of money made, and changes of station. In this regard, they were similar to personnel who leave the Navy. This indicates that these dislikes appear to be accepted as a normal part of Navy life and personnel who reenlist tend to do so in spite of these limitations.

Navy families often face personal and financial problems because of the need to relocate frequently. Family moves have been a regular part of service life. The Navy has implemented the Sponsor Program to provide a personal point of family contact at time of relocation. However, this program appears to be too limited to be of major assistance in improving spouses' feelings and attitudes about the Navy. The manner in which it is implemented can also reduce the possiblity of favorable impact. For example, it has happened that the sponsor assigned to a relocating family was the individual who was being replaced. If contact between families occurs at all under such circumstances, maintaining continuity during the important first few months at a new location is impossible. It has also happened that the sponsor was someone who was dissatisfied with the area or the command. A way to correct this situation might be to convert the existing program into a Family Sponsor Program, with program responsibility assigned to the unit commander. Family sponsors would be co-workers within the unit who are satisfied with the area and the command, and sponsorship would continue until the new family was firmly at home in the community. Some commands invite families to visit units and commands often hold pre-deployment briefings for wives. These activities might be incorporated as part of the Family Sponsor Program. The Navy should explore the feasibility of developing and implementing such a program because the possible payoff in terms of increased retention appears to be great. Many times all it takes to change family attitudes from negative to positive is to demonstrate to family members that someone in the Navy cares about what happens to them. The financial cost of such demonstration could be negligible and the benefits to the Navy in terms of improved personnel satisfaction and increased retention could be enormous.

5.3.7 Career Counseling and Information Facet

The Career Counseling and Information facet is of vital importance for increasing the likelihood of reenlistment because the major focus of the Navy's official retention effort falls in this program area. The Navy Career Counseling Program's major objective is to aid commands in their efforts to retain quality personnel, with emphasis on the critical specialties. The extent to which program efforts are effective in this area justifies Navy expenditures on the program. Research

results indicate that the program has a significant positive effect on retention of first-term personnel. As the program stood at the time the research was conducted, results showed that its impact on personnel in terms of enlistment other than the first was positive, but not significantly so. In the past, the Navy has tended to take a "sure-bet" attitude toward the reenlistment of career personnel. As a result, the program was tailored to the needs of first-term personnel. Personnel retrenchments have made Navy workloads heavy and fringe benefits have been curtailed, largely due to the recent recession. When the economy brightens and civilian jobs become more plentiful, dissatisfactions engendered by heavy workloads and benefit curtailments may result in the loss of career personnel who feel the Navy has taken them for granted. In order to counteract these negative influences, the Career Counseling Program should be redirected to meet the needs of career as well as first-term personnel. At the present time, career counselors appear to have little to offer personnel who are serving in terms of enlistment other than the first term.

Research results show that personnel likely to reenlist felt that the Career Counseling Program was of value to them and their families. They reported that their career counselors were well prepared for interviews, helpful in providing information, willing to listen and help solve problems, and discussed information of interest to counselees. They were satisfied with their career counselors's attitudes and chatted often with them other than in an interview. For the Undecided reenlistment group, personnel within six months of EAOS who felt group counseling would be a good idea were significantly more likely to leave the Navy. Face-to-face contact on an individual basis with counseling tailored specifically to the individual appears to be the desirable method to use in counseling undecided personnel nearing EAOS. All of the factors associated with increased likelihood of reenlistment are qualities associated with effective leadership, management, and counseling of personnel. While some counselors seem to possess these qualities naturally, they can be improved and others can acquire them through training. The importance of maintaining an effective Leadership and Management Training Program and providing effective counselor training through the Career Information and Counseling (CIAC) and Type Command

courses and ensuring that all counselors attend these courses is underscored by these findings. The need to maintain a workable ratio of trained counselors to counselees is also emphasized by these findings. The importance of frequent, specially tailored individual contact by an experienced counselor at strategic times in the reenlistment decision process cannot be overestimated.

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SECTION 6 - IMPLICATIONS OF CAREER SATISFACTION FOR MANAGEMENT OF MANPOWER

The fact that career satisfaction influences retention of Navy enlisted personnel has certain implications important for the management of Navy manpower. Navy policies and regulations are the mechanisms by means of which the continuity and adequacy of the manpower supply is managed. Policies and regulations relating to force strength, pay and fringe benefits, bonus incentives, enlistment terms, selection criteria for enlistment, and eligibility criteria for reenlistment are some of the demand and supply factors used to manage Navy manpower. The possibility of using rank structure and promotion policy has been discussed (Haber, Ireland, & Solomon, 1974). Career satisfaction has the potential to become an important manpower management mechanism. It can be used to predict retention and costs relatively little in terms of cash outlay to implement career satisfaction improvement techniques. Career satisfaction is measurable and has been found to distribute differentially across samples of personnel who stay in and leave the Navy.

Defense manpower has been managed largely through compensation policy. According to Haber, Ireland, and Solomon (1974), "Other policies not related to compensation, such as policies affecting job satisfaction, may also bear on the ability of the services to retain personnel and are amenable to variation by a service. By identifying factors that are related to the decision to reenlist and by relating them to policy alternatives pertaining to compensation, personnel satisfaction, etc., an important first step toward the evaluation of such policies can be made" (p. 2). The rapid rise of manpower costs, skill demands of changing technology, demand for increased productivity, increased time and cost of training, and competition for scarce manpower resources between the military and civilian sectors and across the military services are also factors that impact importantly on the management of defense manpower (Letsky, 1976). The diverse nature of these factors has expanded defense manpower demand and supply into a complex problem which requires application of a total systems approach to reach solution. This means that policy makers must broaden their perspective to include greater use of mechanisms additional to compensation in managing defense manpower.

6.1 INFLUENCE OF CAREER SATISFACTION ON MANPOWER SUPPLY

In a zero-draft environment, the military services must compete in the civilian labor market in order to obtain the defense manpower supply. Quality personnel with skills matching service needs tend to be in relatively scarce supply. A strategy successfully used by civilian organizations in competing for skilled manpower under conditions of scarcity is to become more capital-intensive. Trends show that the military services tend to remain labor-intensive organizations (Clark, 1975). The cost of military pay, retirement, and other benefits has increased and inflation has reduced the buying power of the dollar. Furthermore, Public Law, force strength authorizations, and budgetary constraints tend to limit the freedom with which the military services can allocate funds to obtain, train, and retain personnel. This has created a cost squeeze for the military services that impacts heavily on the supply of defense manpower.

Career satisfaction is a factor influencing the supply of Navy manpower. Economical techniques to increase career satisfaction are available. The Navy has the capability within the command structure and related support agencies to implement these techniques. This capability can be used to assist the Navy in managing its supply of manpower. What is lacking for the Navy to make full use of this assistance is an integrated policy that requires application of career satisfaction improvement techniques in full coordination with compensation and other manpower policy. If such an integrated policy were to be established, the Navy would be able to manage the supply of manpower in a better and more cost-effective manner.

6.2 RELATIONSHIP OF HUMAN WANTS TO ECONOMIC VALUE

An understanding of how human wants relate to economic value is necessary for the formulation of an integrated manpower policy. Human and economic factors must be taken into account in developing such a policy. "Human wants are the mainspring of economic activity. They are the ends toward which economic activity is directed. They constitute the driving force or the motivating power of the economy" (Leftwich, 1960, p.2). Individual motivation is an inner striving

to satisfy individual human wants "described as wishes, desires, needs, drives, and the like" (Berelson & Steiner, 1964, p. 239). Economic activity involves the exchange of goods and services in the market place, and this activity is stimulated by both economic forces and individual motivations.

Economic value is defined as the power of one good or service to command other goods or services in exchange. Economic value has been expressed largely in terms of one common denominator--money. Economists measure economic value in terms of money which they call "price" (Slesinger, 1967). Satisfaction also has exchange power in the market place. Because economic value is influenced by consumer tastes and preferences, individual motivations are also a determiner of economic value.

The economic value of monetary incentives such as pay, bonuses, and fringe benefits has been used as a major motivator to encourage personnel to reenlist in the Navy. However, man does not live by "bread" alone, a fact widely recognized by motivation theorists (Maslow, 1943, 1954; McClelland et al. 1953; Vroom, 1964; and Herzberg, 1966). In addition, the strength of a given incentive tends to diminish as individual human wants for that incentive become satisfied. For example, a hungry person loses interest in food after he has eaten enough to satisfy his hunger. This also holds true for monetary incentives (Herzberg, 1966), especially in an affluent society (Galbraith, 1958). Because individual motivations influence economic value, satisfaction also needs to be taken into account in establishing the true economic value of incentives.

6.3 CAREER SATIFACTION AND THE LAWS OF SUPPLY AND DEMAND

Career satisfaction can be related to the laws of demand and supply through the common denominator of quantity. Career satisfaction tends to distribute normally across a large number of individuals. This distribution tends to follow the bell shape of the normal probability curve, which uses frequency as the horizontal axis. By cumulating frequencies, a conversion to quantity can be made and the distribution of quantity takes on the shape of an ogive curve. Figure 6-1 shows the ogive curve obtained when career satisfaction Total Score frequencies (see Appendix C) were cumulated for the combined first-term research samples.

TOTAL SCORE CAREER SATISFACTION OGIVE

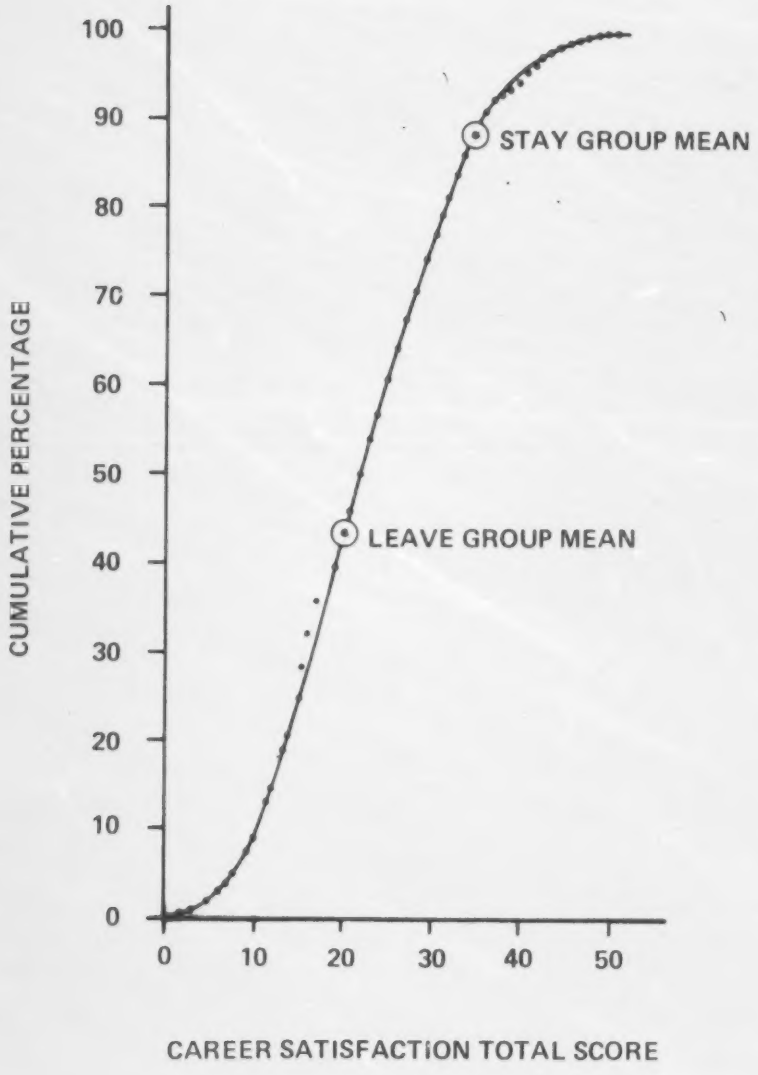

Figure 6-1. Total Score Career Satisfaction Ogive for Combined First-Term Research Samples.

The law of demand states that other things being equal, the quantity demanded by consumers decreases as the price increases. The law of supply states that other things being equal, the quantity supplied by producers increases as the price increases. The point at which the demand and supply curves cross determines the market equilibrium price for a given good or service. These laws can be applied to the demand and supply of Navy manpower. The demand curve reflects Navy need for personnel. For enlistment, the supply is produced from the pool of manpower outside the Navy which includes individuals willing and able to work who meet Navy selection criteria. For reenlistment, supply is produced from the manpower pool which includes personnel already serving in the Navy who meet reenlistment eligibility criteria. These two manpower pools are two non-overlapping sets and a separate supply curve can be generated for each.

Price can be related to manpower through the laws of supply and demand. The influence of varying amounts of career satisfaction on quantity can be compared against the influence of varying price by the simple expedient of plotting demand and supply curves and the satisfaction ogive curve using the same quantity axis.

6.4 QUASI-ECONOMIC MANPOWER MODEL

A quasi-economic manpower model relating career satisfaction to the laws of supply and demand can be developed using quantity as the common denominator. Figure 6-2 shows a prototype of such a model. In this figure the satisfaction ogive curve has been transposed so that quantity is expressed horizontally. The relationship between the satisfaction ogive (SO) curve and supply (S) curve is defined in this figure. Comparison of these two curves can be used to estimate the amount of change in price or satisfaction that is required to provide the Navy with a given quantity of manpower.

The Navy demand (D) curve in this model is assumed to follow a pattern beginning at the minimum quantity required for the Navy to function as an organization. The demand curve follows a downward path and drops sharply after reaching the point (Q_3) at which the Navy is at full strength and all manpower needs have been met. Quantities were converted to percentages for purposes of scaling. The

PROTOTYPE OF QUASI-ECONOMIC MODEL

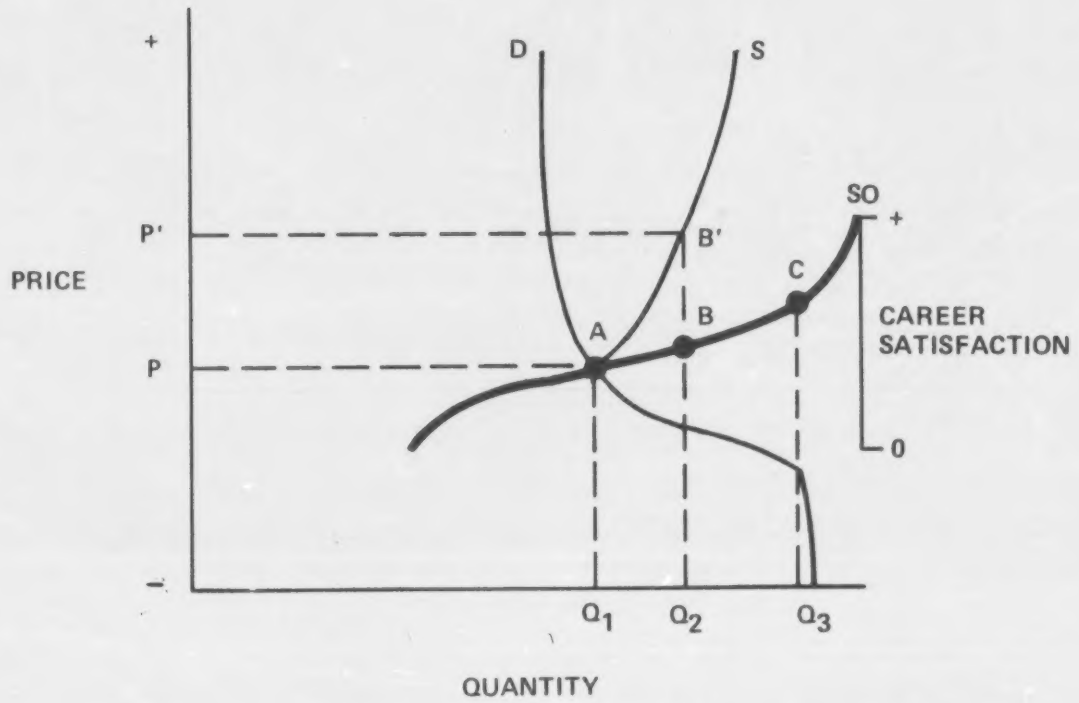

Figure 6-2. Prototype of a Quasi-Economic Model Relating Career Satisfaction to the Laws of Supply and Demand

satisfaction ogive is drawn to a scale that permits: (1) obtained average satisfaction of those in the research sample who left the Navy (A) to drop a perpendicular to the quantity (Q_1) of enlisted personnel who reached the reenlistment decision point in FY75 and (2) obtained average satisfaction of those who stayed in the Navy (C) to drop a perpendicular to the quantity (Q_3) which reflects the total strength of Navy enlisted personnel in FY75.

The Navy supply (S) curve in this model is assumed to follow an upward path beginning at A because the reenlistment supply excludes personnel who have not yet reached EAOS, as represented by Q_1. The reenlistment supply is limited to those Navy personnel who reach EAOS in a given time period (Q_3-Q_1) and who are willing and able to reenlist. The supply curve becomes asymptotic short of Q_3 because it is assumed that some Navy personnel would refuse to reenlist no matter how much price might be increased and that some would be ineligible to reenlist. The market equilibrium price (P) equals the price the Navy is authorized to offer.

This model can be used to aid Navy policy makers in the following way. Assume that Navy needs require personnel in the quantity of Q_2 to reenlist. This model identifies two mechanisms that can be used to satisfy this need--varying price or satisfaction. To determine the amount of price increase required, the supply curve is followed upward from A until a perpendicular can be dropped to Q_2. The point at which this occurs (B') determines the amount price must be increased to reach market equilibrium price (P'). To determine the amount that average satisfaction must be increased, the satisfaction ogive is similarly followed to the point (B) at which a perpendicular can be dropped to Q_2. According to the model, both mechanisms will achieve the same net result. Increasing the price will require authorization of additional funds, which is difficult if not impossible. Increasing career satisfaction can be accomplished economically with little if any need for additional funds.

A quasi-economic model such as the one just discussed could be used to powerful advantage in these cost-conscious times. Navy capability to implement career satisfaction improvement techniques exist and positive change can be effected through combined actions of the command structure, the Leadership and Management Training Program, the Human Resource Management Program, and the Career Counseling Program working in conjunction with other Navy support agencies. In addition, if career satisfaction were to be increased, overall Navy organizational effectiveness would probably also be improved. However, two things are currently lacking. First, the Navy must decide that taking positive action to increase career satisfaction is in the Navy's best interest and is necessary to ensure fleet readiness. Such a decision is required to provide the will and the way to make increased career satisfaction an accomplished fact throughout the Navy. Second,

a full-scale quasi-economic manpower model based on empirical evidence and adequate to meet Navy policy and planning needs must be developed.

The prototype quasi-economic model demonstrates the feasibility of developing a full-scale model. The empirical evidence available for use in developing this prototype was limited to the research sample, economic conditions have changed since the data were collected, and satisfaction across ratings was not taken into consideration. The satisfaction ogive needs to be updated to reflect current conditions using a larger stratified sample so that separate models more closely tuned to Career Re-enlistment Objectives (CREO) groups and ratings can be developed. In addition, the theoretical relationships between the satisfaction ogive, supply, demand, and quantity need to be carefully examined in order to determine the best way to model these relationships.

Demand and supply elasticities are useful in economic analysis because they indicate "how much" of a change in demand or supply has resulted from a change in price. Demand elasticity is a measure of the responsiveness of quantity supplied to changes in price. Supply elasticity is a measure of the responsiveness of quantity supplied to changes in price. Elasticity implications of the satisfaction ogive need to be examined and a concept of career satisfaction elasticity can and should be developed. Elasticity has been used in manpower studies to measure the effects of a change in wages to the supply and demand for labor. Investigators tend to differ as to whether the military manpower question is demand or supply oriented. Many studies have focused either exclusively on the supply side using elasticity estimates as supply indicators (Arrow, 1963; Fischer, 1969; Flotz, 1970; Canby, 1972) or on the demand side using elasticity estimates as demand indicators (Canby, 1972; O'Connell, 1976). The relationship between the various elasticity indicators and career satisfaction elasticities remains a problem to be solved in the future.

In summary, the feasibility of developing a quasi-economic manpower model has been demonstrated. A prototype model has been presented and its advantages and limitations discussed. Actions required to develop a full-scale quasi-economic model have been identified and discussed. If these actions are taken, the Navy will obtain a cost-effective and powerful tool to assist Navy policy makers in the management of Navy manpower supply.

SECTION 7 - SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The research described in this report was directed toward determining the feasibility of developing a technique for measuring career satisfaction of Navy enlisted personnel. Other objectives were to determine the extent to which attitudinal data and personnel records could be used to predict actual reenlistment behavior, to test the feasibility of identifying target populations differentially receptive to reenlistment, and to develop a technique for contacting and positively influencing enlisted personnel concerning their reenlistment decisions. Results obtained in this research demonstrate that career satisfaction measures can be used to predict retention of Navy enlisted personnel. Research findings will be summarized, and conclusions and recommendations based on these results presented in the remainder of this section.

7.1 SUMMARY

Career satisfaction is of importance to organizations because it motivates member behavior. Review of the literature showed that job satisfaction, feelings of self-worth, family attitudes, and the work environment have been found to influence career satisfaction. Because it is a motivator, career satisfaction has incentive value that can be used advantageously by organizations. Greater understanding of how it functions as an individual motivator and how this impacts on organizational effectiveness and the management of manpower is needed in order to make better use of the incentive value of career satisfaction.

Career satisfaction is a construct that includes satisfaction with occupation, work, and life. Suitability of career choice determines the goodness of fit between individual and career. Although career choice is of major concern to young people, those in their middle years often find it necessary to change careers. Causes beyond the control of individuals include technological

change, unfavorable economic conditions, and the organizational situation. Individuals also change careers for personal reasons, such as dissatisfaction with present position. The diversity of factors that influence worker compatibility with job situation are included in the construct of career satisfaction.

If an organization is to function effectively, the majority of its members must be satisfied with their career opportunities within the organization. If members are dissatisfied, this creates motivation, retention, and turnover problems which can impact heavily in fiscally constrained organizations. Gaining a better understanding of these problems can assist organizations in finding better ways to solve them.

Motivation has been described as the mainspring of all economic activity and the force which causes work to be performed. Job satisfaction reflects workers' attitudes toward tasks they perform, roles they play in the work setting, and other conditions of employment. A number of instruments have been developed to measure job satisfaction and influencing factors found using these instruments include work environment, occupational group, expectancy, self-esteem, and overall satisfaction with life. The relationship found between job satisfaction and job performance tends to be slightly positive. The relationship obtained between job satisfaction and absenteeism and turnover has rather consistently been found to be inverse and moderately strong. A "spillover" effect between job and overall satisfaction with life has also been obtained.

Career satisfaction research results indicate that feelings of self-worth and esteem tend to influence reenlistment decision, and personal growth opportunities and fulfillment of assignment expectations are related to reenlistment. Fringe benefits are important to Navy enlisted personnel, and attitudes of spouse and family influence reenlistment decision. Effective career counseling impacts positively on retention, and individual counseling

of undecided personnel is important. First-term personnel tend to be less satisfied with their careers in the Navy than personnel in other terms of enlistment.

A quasi-experimental method was used to obtain these results. Attitudinal data and personnel records were used to predict actual reenlistment behavior of a sample of 898 enlisted personnel composed primarily of those in the first term of enlistment. Attitudinal data were obtained from responses to earlier career counseling surveys administered to 4455 enlisted personnel stationed in the San Diego, Norfolk, and Pearl Harbor areas. Personnel who reached a reenlistment decision point in their term of enlistment and for whom empirical evidence of decision was available constituted the analysis sample used in this research.

Using the concept of core values to provide a theoretical framework, hypotheses concerning self-worth and esteem, recognition, growth, expectancy, vital statistics, job, economics, family, training, recruiter/retention, career counseling, information, and treatment of others were generated and tested using actual reenlistment behavior as the criterion. Two independent samples of first-term personnel were used for experimental test and validation of hypotheses. Those hypotheses confirmed at statistically significant levels were aggregated into logical categories and developed into a Career Satisfaction Inventory. Category subscores, total scores, and a strength of feeling measure were obtained and compared for the two samples of first-term personnel. Results were cross-validated using a third independent sample of personnel in terms of enlistment other than the first. Statistically significant differences between all means were obtained for the samples of first-term personnel. Job, Vital Statistics and Economics, Self-Worth/Esteem and Recognition, and Recruiter/Retention subscores, total score, and the strength of feeling measure yielded statistically significant differences between Stay and Leave group means for the cross-validation sample. Using these results, a prototype model relating career satisfaction to manpower supply and demand was developed and implications of the model for the management of manpower were discussed.

7.2 CONCLUSIONS

On the basis of results of this research, two major conclusions were reached. These were:

Conclusion 1: Development of a technique for measuring career satisfaction of Navy enlisted personnel is feasible.

Conclusion 2: Attitudinal data and personnel records can be used as measures of career satisfaction to predict the likelihood of reenlistment of Navy enlisted personnel.

Fifteen additional conclusions were reached. Six of these were general conclusions concerning career satisfaction, seven were specifically concerned with facets of career satisfaction, and two were concerned with the implications of career satisfaction for the management of manpower. The general conclusions concerning career satisfaction were:

Conclusion 3: A career is a life-long course of action involving the whole person--self, family, occupation, work environment, and community--through which individual abilities and experience are applied in a purposeful manner, and satisfaction with aspects of life other than job influences satisfaction with career.

Conclusion 4: Career satisfaction is of key importance for organizations which require personnel and their families to adopt a new life style, such as the Navy way of life, because career satisfaction takes the whole person into account.

Conclusion 5: Career satisfaction influences retention, turnover, and absenteeism, which are important determiners of effectiveness for labor-intensive organizations such as the Navy.

Conclusion 6: The amount of career satisfaction experienced by individuals is largely determined by the degree to which their wants and needs are satisfied, their expectancies are met, and their core values are congruent with organizational goals.

Conclusion 7: Techniques designed to improve organizational effectiveness, morale, and esprit which are being widely implemented by business, industry, and civilian and military Government agencies including the Navy can also be used to positively influence career satisfaction of Navy enlisted personnel.

Conclusion 8: Making planned use of the incentive value of career satisfaction can assist the Navy in its efforts to increase retention of Navy enlisted personn l.

In descending order of importance for maintaining fleet readiness, taking number of personnel affected and potential for actionability at the unit command level into account, the seven conclusions concerning facets of career satisfaction were:

Conclusion 9: Job Facet. Personnel likely to reenlist find their present jobs interesting and important to the Navy. They feel that their abilities are being well utilized by the Navy. They are satisfied with their tours of duty and job assignments.

Conclusion 10: Family Facet. The Navy, by and large, tends to enlist a single person and reenlist a married one. Spouses' feelings about the Navy are important influencers of reenlistment decision.

Conclusion 11: Career Counseling and Information Facet. The impact of the Career Counseling Program on retention is strongly positive for first-term personnel and much less positive for personnel in other terms of enlistment. Personnel likely to reenlist felt that the Career Counseling Program was of value to them and their families. They felt that their career counselors were well prepared for interviews, helpful in providing information, and willing to listen. They helped solve problems and discussed information of interest. Personnel were satisfied with their career counselors' attitudes and chatted often with counselors other than in an interview. All of these qualities characteristic of the good counselor are also associated with effective leadership and management of personnel. Individual counseling appears to be the desired method for delivery of counseling services to undecided personnel nearing the end of their first term of enlistment.

Conclusion 12: Self-Worth/Esteem and Recognition Facet. Personnel more likely to reenlist feel that they are treated fairly, with respect, and as individual human beings. They feel useful in their jobs, well regarded by their superiors, and recognized for doing a good job. They also feel that they are making a contribution to society by serving in the Navy.

Conclusion 13: Growth and Expectancy Facet. Personnel are more likely to reenlist if they are satisfied with their chances of promotion, if they feel that their service in the Navy is a valuable experience, if they feel their Navy work experience will be an advantage in getting a civilian job, if they plan to continue their education while in the Navy, and if they are given opportunity for choice of Navy location.

Conclusion 14: Vital Statistics and Economics Facet. Personnel receiving or motivated to receive special pay or bonus incentives are more likely to reenlist. Race other than white and citizen not U.S. native born are also predictors of reenlistment.

Conclusion 15: Recruiter/Retention Facet. Personnel who reenlist talk realistically about the Navy and are likely to encourage others to join. This facet is the best predictor of retention but is least actionable by most echelons within the Navy command structure.

The two conclusions concerning the implications of career satisfaction for manpower management were:

Conclusion 16: Defense manpower has been managed largely through compensation policy. Career satisfaction measures distribute predictably across samples of Navy enlisted personnel. Using this as a basis, career satisfaction policy can be developed and integrated with compensation policy to increase Navy capability to manage manpower.

Conclusion 17: Development of a quasi-economic manpower model integrating career satisfaction with Navy manpower supply and demand is feasible using quantity of manpower as the common denominator. Career satisfaction information specific to Navy ratings which reflects current economic conditions is needed to develop such a model.

7.3 RECOMMENDATIONS

Five major recommendations are made based on findings obtained and conclusions drawn from this research. Following each major recommendation, supportive amplification and specific recommendations for actions to be taken are also presented.

Recommendation 1: The Navy should make career satisfaction improvement an integral part of the Navy organizational effectiveness improvement program and place more emphasis on increasing the effectiveness of leadership and management of human resources throughout the chain of command. (Based on Conclusions 1, 3, 4, 5, 6, 7, 9, 12, and 13.)

Navy enlisted personnel are more likely to reenlist if they feel they are treated fairly and with respect, are engaged in useful work, receive recognition for doing a good job, and feel they are informed about the goals of the Navy and their own Navy career possibilities. The application of principles of good leadership and management is a major factor influencing these feelings. If Navy supervisors and managers at all levels practice sound leadership and management principles, individuals will tend to feel that what they are doing is important to the command's operation. Positive feedback during the first six months after joining a unit is probably one of the most crucial times because this is the period in which overall satisfaction with Navy life appears to drop most sharply. The unit chain of command has the potential, authority, and position required to apply the principles of good leadership and management to cultivate feelings of personal worth and dignity in personnel while effectively accomplishing the Navy's mission. The Leadership and Management Training Program, the Human Resource Management Program, and the Navy Career Counseling Program are resources that can be used to assist commands in realizing unit potential in these areas.

Specifically, we recommend that the following actions be taken:

a. Unit commanders should be strongly encouraged to enable a large percentage of the chain of command to attend Leadership and Management Program training courses.

b. Unit commanders should be strongly encouraged to make more effective utilization of the consulting services of the Human Resource Management Centers and Detachments which are available to assist them in upgrading command leadership and management skills.

c. Unit commanders should be strongly encouraged to optimize the use of Navy career enhancement opportunities. This would include the early identification of individuals who are high performers and jointly, a thorough investigation of available Navy professional growth programs with these individuals.

d. The positive influence of the Navy's Race Relations and Equal Opportunity Program on retention should be officially recognized and personnel implementing the program should be encouraged to continue their beneficial efforts in this area.

> *Recommendation 2: The Navy should make planned use of the incentive value of career satisfaction to assist in the management of manpower. (Based on Conclusions 1, 2, 5, 6, 8, 14, 16, and 17.)*

The Navy can increase retention by making use of the incentive value of career satisfaction. Commands can make use of measures of career satisfaction in their retention programs almost immediately. A quasi-economic model is needed if Navy policy makers are to make full use of the incentive value of career satisfaction. In order to develop such a model, the satisfaction of personnel needs to be systematically examined on a rating by rating basis. The Human Resource Management Center in Pearl Harbor has analyzed Human Resource Management Survey data and promising results have been obtained using this approach. Additional investigation is required in order to develop a full-scale model adequate to meet the Navy's manpower planning and policy needs.

Specifically, we recommend that the following actions be taken:

a. The Navy should implement the phased use of the Career Satisfaction Inventory as a unit retention aid. The first phase should be a trial by a few selected units. Modifications which might be required to adapt procedures to the operational environment should be made during this trial phase. If the results of this trial phase are favorable,

the inventory and revised procedures should be implemented Navywide as an aid to assist commands in their retention efforts.

b. The Navy should take steps to develop a full-scale quasi-economic model. As a first step, critical ratings with ample billets should be selected and data currently available for those ratings analyzed, including at least the career counseling data base, selected Enlisted Master Tapes, and the Human Resource Management Survey data base. New data should be collected, as required, using stratified samples drawn from these ratings. Initial models should then be developed for each of the ratings. Results of analyses used to develop these models could also be used to identify areas where positive actions could be taken to improve career satisfaction of personnel in these ratings. By repeating this cycle across ratings, a full-scale model should then be developed.

c. The Navy should take positive actions to ensure that policy makers broaden their perspective so that the application of career satisfaction improvement techniques are fully coordinated with compensation and other manpower policies.

d. The Navy should continue use of monetary incentives such as the Selective Reenlistment Bonus (SRB) and special pay for critical ratings and augment their use with planned use of career satisfaction improvement techniques (actions b and c under Recommendation 1) as soon as possible.

Recommendation 3: The Navy should take positive actions to encourage favorable attitudes toward Navy life on the part of spouses because spouses are an important influencer of retention. (See Conclusions 3, 4, 5, 6, 10, and 11.)

Generally speaking, the Navy enlists a single person and reenlists a married one. The Navy should take positive actions to ensure that spouses' experiences with Navy life are as favorable as possible. If wives attitudes toward the Navy way of life are favorable, the likelihood of their husbands' reenlisting in the Navy is increased. The Navy Career Counseling Program is an important means by which wives can obtain the counseling information required to provide the knowledge baseline necessary to sustain a realistic outlook on Navy life. In providing counseling information, special care should be taken to ensure that these efforts are perceived to be beneficial by Navy personnel and their spouses, rather than an infringement on their personal lives.

Specifically, we recommend that the following actions be taken:

a. The Navy Career Counseling Program should continue expanding the effort directed toward counseling Navy wives and emphasize the need to provide fundamental information to new Navy wives in a timely manner.

b. The Navy should ensure that Navy Wives Information Schools are available and easily accessible to wives in all major areas of Navy concentration. All new Navy wives and other interested wives should be provided the opportunity and encouraged to attend such a school conducted near their places of residence.

c. All Navy wives should be made aware of the services offered by the Wives' Ombudsman Program and the Navy Family or Personal Services Offices. Commands should be encouraged to utilize the potentially positive influence that these programs can have on retention.

d. The Navy should encourage Ombudsmen to communicate regularly with commands and to provide feedback to commands on an open basis. This will assist in alleviating and eliminating misunderstandings pertaining to Navy life and dependent benefits which could negatively affect the on-the-job performance and reduce the likelihood of reenlistment of Navy personnel.

e. The Navy should seriously consider expansion of the current Sponsor Program into a Family Sponsor Program with program responsibility assigned to the unit commander. Single and married personnel should be assigned appropriate co-worker sponsors who are satisfied with the locality and the command, and who are scheduled to remain in place for at least six months. For a married sponsor, the spouse should also be willing to assume the role of sponsor.

> *Recommendation 4: The Navy should develop a "life-span" career counseling approach designed for use in the Career Counselor Program and for implementation through the command structure. (Based on Conclusions 3, 4, 5, 6, 9, 11, 13, and 15.)*

The objective of a "life-span" career counseling approach would be to create an environment in which Navy service is viewed as an important and valuable progression along a total career path. Individuals likely to perform well and stay on the job tend to feel that they are in their present jobs by choice rather than because they cannot obtain employment elsewhere. They tend to have a long-range career perspective that fits present position into a plan for their own career growth and development. Navy personnel who believe that they can learn and grow by serving in the Navy and that the experience gained will be of future career advantage are more likely to perform well and stay in the Navy.

Specifically, we recommend that the following actions be taken:

a. The Navy Career Counseling Program should be modified to better meet the needs of career personnel and assist them in viewing a continuing Navy career from a "life-span" perspective.

b. Career progression profiles specific to individual Navy ratings should be developed and maintained. A profile should show typical assignments and educational experiences required of Navy personnel in order to prepare them for advancement in the given rating. Information and experience required for individuals to take full advantage of proficiency

and skill development opportunities available to personnel in each rating should also be specified. Profiles should be used by career counselors and recruiters to assist individuals in making initial Navy career choices and to monitor counselee progress at key career points. Profiles could also be used by personnel to obtain increased understanding of how best to build a career in a Navy rating and prepare for continued productivity following retirement from the Navy. Profiles could also serve as a baseline for use by Navy detailers, planners, and decision makers in monitoring actual career experiences by rating and identifying needed changes in rating structures.

c. The Navy should expand the use of job design and work restructuring techniques as a means of making jobs more interesting and satisfying to Navy personnel. Individuals who feel their jobs are interesting and important to the Navy and who feel their abilities are being well utilized are more likely to have greater job commitment and view high performance on the job as important for career growth and development. Although there are elements intrinsic to most jobs which tend to be viewed as less than satisfying, judicious application of work restructuring techniques which modify the work environment within necessary mission constraints has the potential to increase motivation by improving job satisfaction and to increase organizational effectiveness by improving the efficiency with which work is performed.

Recommendation 5: The Navy should take all steps possible to eliminate discrepancies between personnel's expectancies about Navy career opportunities, available benefits, and programs and their experiences in these areas. (Based on Conclusions 1, 2, 3, 6, 7, 11, 13, 14, and 15.)

Discrepancies between expectations and experiences tend to create a credibility gap. Changes in the national economy and the world situation have caused policy makers to reexamine personnel and compensation policies, and some changes have been made as a result of this reexamination. If changes impact negatively on

the perceptions of personnel about the dependability of the Navy as an employer, personnel tend to become dissatisfied with Navy life and this dissatisfaction lessens the likelihood of reenlistment.

Factors which contribute to the creation of a credibility gap include: lack of information, inaccurate information, changes in programs caused by Congressional actions, and changes in programs caused by changing Navy priorities. It is in the Navy's best interest to bridge the credibility gap which can negatively impact on morale, organizational effectiveness, and retention.

Specifically, we recommend that the following actions be taken:

a. The Navy should ensure that accurate and current information on career opportunities, benefits, and programs is available at the unit level so that commanders can disseminate this information in a timely manner and career counselors can effectively perform their assigned duties.

b. The Navy should ensure that career counseling information clearly articulates the difference between fringe benefits intended to remain stable and variable benefits designed to assist the Navy in filling ratings where shortages are occurring. Career counselors should be trained to articulate this difference effectively to all personnel counseled.

c. The Navy should take positive action to ensure that all Navy personnel are aware of the Navy's position on proposed changes to Navy policy, benefits, and programs in order to counteract misconceptions that may occur in these areas.

d. The Navy should explore the possibility of taking planned advantage of recent reenlistees' favorable attitudes toward the Navy. For example, informal meetings between recent reenlistees with positive attitudes toward the Navy and newly assigned personnel or those nearing the end of enlistment term could be arranged for the purpose of discussing Navy Career opportunities. Such an approach could expand resources available for retention within commands at no additional cost to the Navy.

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APPENDIX B - LEAVE AND STAY DISTRIBUTIONS

This appendix contains Career Satisfaction Inventory Leave and Stay distributions for the seven categories, the strength of feeling measure and the total score.

Table B-1. Comparison of Leave and Stay Distributions for Self-Worth/Esteem and Recognition Response Category.

Category Score (Max=11)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
11	4	1	2	1	1	2
10	9	5	4	4		5
9	16	7	7	5		3
8	28	6	8	5	1	6
7	40	8	16	3	2	3
6	52	13	10	7	4	5
5	66	8	24	5	3	5
4	72	5	24	2	1	4
3	92	5	24	4	2	4
2	69	4	26	2	1	
1	87	3	31	1	1	
0	26	1	3	0		
Totals	561	66	179	39	16	37
Mean	3.94	5.94	4.09	6.38	5.31	6.78
S.D.	2.52	2.62	2.60	2.60	2.44	2.46
Diff	2.00		2.29		1.47	
F	36.573***		24.893***		4.007*	

Table B-2. Comparison of Leave and Stay Distributions for Growth and Expectancy Category.

Category Score (Max=8)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
8	8	6	4	8		7
7	29	17	18	9	3	9
6	75	17	27	5	4	7
5	93	11	39	4	2	5
4	105	7	22	8	7	6
3	85	3	28	2		2
2	81	3	20	2		
1	61	2	12	1		
0	24		9			1
Totals	561	66	179	39	16	37
Mean	3.71	5.59	4.13	5.64	5.19	5.84
S.D.	1.93	1.73	2.03	1.97	1.22	1.82
Diff	1.88		1.51		.65	
F	57.664***		18.043***		1.703	

*** .01 level of significance
** .05 level of significance
* .10 level of significance

Table B-3. Comparison of Leave and Stay Distributions for Vital Statistics and Economics Category.

Category Score (Max=8)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
6	2		1			
5	35	5	7	4	3	2
4	63	23	23	15	3	6
3	92	27	25	9	6	5
2	131	6	34	5	2	12
1	156	5	41	3	1	7
0	82	0	48	3	1	5
Totals	561	66	179	39	16	37
Mean	2.02	3.26	1.77	3.08	3.13	2.16
S.D.	1.45	1.00	1.54	1.40	1.41	1.42
Diff	1.24		1.31		.97	
F	45.638***		23.863***		5.138**	

Table B-4. Comparison of Leave and Stay Distributions for Family Category.

Category Score (Max=6)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
6	52	22	15	16	8	19
5	73	12	22	5	1	12
4	47	2	13		5	
3	22	1	6			
2	18	1	14	5	1	5
1	283	26	87	12		1
0	66	2	22	1	1	
Totals	561	66	179	39	16	37
Mean	2.23	3.50	2.15	3.67	4.69	5.00
S.D.	1.99	2.34	1.94	2.34	1.74	1.49
Diff	1.27		1.52		.31	
F	23.218***		18.151***		.443	

*** .01 level of significance
** .05 level of significance
* .10 level of significance

Table B-5. Comparison of Leave and Stay Distributions for Job Category.

Category Score (Max=11)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
11				3		1
10	3	8	4	5	1	6
9	10	9	3	5		6
8	25	15	8	5		6
7	40	10	11	3	1	6
6	58	5	22	8	2	3
5	82	7	29	3	3	2
4	96	6	21	5	6	4
3	93	4	38		2	1
2	86	2	22	1	1	2
1	57		16	1		
0	11		5			
Totals	561	66	179	39	16	37
Mean	4.01	6.91	4.15	7.05	4.75	7.19
S.D.	2.14	2.23	2.26	2.53	1.88	2.42
Diff	2.90		2.90		2.44	
F	107.605***		50.475***		12.805***	

Table B-6. Comparison of Leave and Stay Distributions for Career Counseling Category.

Category Score (Max=11)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
10	3	8		2		1
9	14	9	5	8	3	3
8	33	15	13	7	2	2
7	40	10	15	3	2	2
6	66	5	15	4	1	5
5	56	7	15	2	1	6
4	70	6	19	4	1	7
3	82	4	18	7	2	7
2	89	2	29		2	1
1	71		34		1	2
0	37		16	2	1	1
Totals	561	66	179	39	16	37
Mean	3.83	6.00	3.58	6.15	5.19	4.86
S.D.	2.43	2.23	2.60	2.75	3.08	2.38
Diff	2.17		2.57		.33	
F	46.269***		30.634***		.171	

*** .01 level of significance
** .05 level of significance
* .10 level of significance

Table B-7. Comparison of Leave and Stay Distributions for Recruiter/Retention Category.

Category Score (Max=5)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
5	2	19	1	5		15
4	7	9		9		11
3	12	10	11	10		6
2	115	14	33	9	8	2
1	230	9	75	5	6	2
0	195	5	59	1	2	1
Totals	561	66	179	39	16	37
Mean	.95	3.00	1.00	2.92	1.38	3.86
S.D.	.90	1.66	.92	1.33	.72	1.32
Diff	2.05		1.92		2.48	
F	245.088***		116.929***		50.397***	

Table B-8. Comparison of Leave and Stay Distributions for Strength of Feeling Measure.

Category Score (Max=11)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
11	54	12	9	7		2
10	22	7	12	3	1	8
9	33	12	8	8		5
8	40	7	29	8	3	5
7	69	6	16	4	1	4
6	60	8	18	1	3	4
5	54	7	13	3	1	4
4	57	4	20	3	3	2
3	42	2	18	1	1	1
2	35	1	15		1	1
1	84		17	1	2	1
0	11		4			
Totals	561	66	179	39	16	37
Mean	5.44	7.80	5.53	7.90	5.19	7.38
S.D.	3.21	2.47	3.04	2.51	2.66	2.58
Diff	2.36		2.37		2.19	
F	33.423***		20.659***		7.922***	

*** .01 level of significance
** .05 level of significance
* .10 level of significance

Table B-9. Comparison of Leave and Stay Distributions for Career Satisfaction Inventory Total Score.

Category Score (Max=58)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
52		1				
51						
50		2		1		
49		1		1		
48	1			2		
47		1		1	1	2
46	1	1	1	1		
45	1	1		2		1
44	3	5		1		2
43		3				3
42	1	1	2	1	1	3
41	2	2	1	4		1
40	2					4
39			2	1		1
38	5	3	2	2		
37	3	3	3		1	
36	4	5	3	1		1
35	7	1	5	2	1	3
34	12	6	4		1	3
33	11	4	2	3		
32	11	5	4	3		2
31	14	1	5	1	1	2
30	13	1	1	2		
29	14	1	6	1	3	2
28	22	2	3			
27	18	1	11	1	1	3
26	23	2	4	1	1	
25	23	1	5	1	1	1
24	18	5	7	2		1
23	20	1	4		1	
22	23	3	6	1	1	
21	23	1	6			2
20	17		5			
19	26		6	1	2	
18	22		6			
17	29		3	1		
16	31	1	2			
15	16		12			
14	17	1	12			
13	25		6	1		
12	17		7			
11	14		8			

Table B-9. Comparison of Leave and Stay Distributions for Career Satisfaction Inventory Total Score (Cont'd).

Category Score (Max=58)	First Term				Other Terms	
	Phase 1		Phase 2		Phase 2	
	Leave	Stay	Leave	Stay	Leave	Stay
10	20		7			
9	8		7			
8	14		1			
7	11		3			
6	7		4			
5	6		1			
4	6					
3			2			
Totals	561	66	179	39	16	37
Mean	20.70	34.20	20.87	34.90	29.63	35.70
S.D.	8.60	8.66	9.52	9.45	7.87	7.37
Diff	13.50		14.03		6.07	
F	145.302***		69.655***		7.298***	

*** .01 level of significance
** .05 level of significance
* .10 level of significance

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APPENDIX C - TOTAL SCORE CUMULATIVE DISTRIBUTIONS

This appendix contains Career Satisfaction Inventory Total Score frequency distributions for the combined Phase 1 and Phase 2 samples of first-term personnel. Cumulative percentages required to create satisfaction ogives also appear.

Table C-1. Stay and Leave Distributions for Combined First-Term Personnel Samples

TOTAL SCORE	Stay Group		Leave Group		Total Group	
	Number	Cumulative Percentage	Number	Cumulative Percentage	Number	Cumulative Percentage
52	1	100			1	100
51						
50	3	96			3	>99
49	2	94			2	99
48	2	92	1	100	3	99
47	2	90			2	99
46	2	89	2	>99	4	98
45	3	86	1	99	4	98
44	6	80	3	99	9	97
43	3	77			3	96
42	2	75	3	99	5	96
41	6	70	3	98	9	95
40			2	98	2	94
39	1	69	2	98	3	94
38	5	64	7	97	12	93
37	3	61	6	96	9	92
36	6	55	7	95	13	90
35	3	52	12	93	15	88
34	6	47	16	91	22	86
33	7	40	13	90	20	83
32	8	32	15	87	23	81
31	2	31	19	85	21	78
30	3	28	14	83	17	76
29	2	26	20	80	22	74
28	2	24	25	77	27	70
27	2	22	29	73	31	67
26	3	19	27	69	30	63
25	2	18	28	66	30	60
24	7	11	25	62	32	56
23	1	10	24	59	25	53
22	4	6	29	55	33	49
21	1	5	29	51	30	45
20			22	48	22	43

APPENDIX C-TOTAL SCORE CUMULATIVE DISTRIBUTIONS (Cont.)

Table C-1. Stay and Leave Distributions for Combined First-Term Personnel Samples (Continued)

TOTAL SCORE	Stay Group		Leave Group		Total Group	
	Number	Cumulative Percentage	Number	Cumulative Percentage	Number	Cumulative Percentage
19	1	4	32	44	33	39
18			28	40	28	36
17	1	3	32	36	33	32
16	1	2	33	31	34	28
15			28	27	28	24
14	1	1	29	24	30	21
13	1	<1	31	19	32	18
12			24	16	24	14
11			22	13	22	12
10			27	10	27	8
9			15	7	15	7
8			15	5	15	5
7			14	4	14	3
6			11	2	11	3
5			7	1	7	1
4			5	<1	6	<1
3			2	<1	2	<1
2						
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